ABSTRACT OF A

Clinical Lecture

ON A

CASE WHERE A SCIRRHOUS CARCINOMA OF THE PROSTATE WAS REMOVED.

Delivered at the Liverpool Royal Infirmary,

BY REGINALD HARRISON, F.R.C.S.,

SURGEON TO THE INFIRMARY.

GENTLEMEN,—About twelve months ago I brought under your notice two specimens of large adenomas of the prostate which had been successfully removed in the course of operations for lateral lithotomy. Both of the patients now remain perfectly well, and have shown no signs either of a recurrence of the prostatic growths or a re-formation of calculi. One of these cases was at the period referred to under my care in the infirmary, when you had the opportunity of watching what was done for the patient. I have since learnt from his medical attendant, Dr. Samuels of this city, that he has continued to enjoy good health. The other case occurred in the practice of Mr. Bickersteth, who kindly allowed me to show the tumour removed, which will be found in our museum. Four years after this operation Mr. Bickersteth knew that the patient was in the enjoyment of perfect health. The size of the tumours in these cases and the process of enucleation which was employed in their removal distinguished them, in my opinion, from the majority of instances where portions of hypertrophied prostate have been accidentally detached in the course of operations for stone, or have come away between the blades of the forceps. So important did I consider these cases, in conjunction with others that may be found scattered through surgical records, that I then ventured to draw the following conclusions:—

1. That in some cases of enlargement of the prostate attended with pressing symptoms of distress otherwise irremediable, it might be expedient to practise digital exploration of the gland, such as the operations as for lithotomy permitted. 2. That this proceeding might permit of the safe removal of the whole or a portion of the growths with such advantage to the patients as was illustrated in the cases that I brought forward. 3. That the operation of exploration, even if it did not permit of the removal of the growth, would relieve the patient's symptoms so far as micturition was concerned. Mr. Lund's important case of prostatotomy[1] furnished a good illustration of this.

In continuation of this subject I will proceed to narrate the particulars of the case I am bringing under your notice to-day; after which the patient will be introduced.

J. B——, aged sixty-four, came under my observation in August, 1882. His chief symptoms related to hæmaturia and frequency in micturition. The patient had up to nine months previously enjoyed good health. There was no history either of syphilis or tubercle. Two months ago he noticed that his left testicle became swollen. This was strapped, when the swelling passed to the right one, which was considerably enlarged on his admission to the infirmary. On exploration by the rectum the prostate was found somewhat enlarged, indurated, and nodulated. On examination with a sound some obstruction was revealed in the prostatic urethra, but neither stone nor roughness within the bladder could be detected. He passed urine every two hours or oftener both by day and night, and the urine was largely mixed with blood. Nothing like a villous structure could be detected after careful examination with the microscope of some shreds contained in the urine. The right testicle was somewhat enlarged but uniformly so. No glandular enlargement could be detected. All kinds of treatment were tried; but though matico diminished the quantity of blood in the urine, yet the extreme irritability continued, under which the patient's health was rapidly giving way. Under these circumstances I determined to explore the prostate and neck of the bladder with the finger. On October 25th I opened the membranous urethra as for the median operation for stone. On exploring the prostate I found a solid mass projecting into the urethra and occupying the neck of the bladder. This, with some little trouble and with the assistance of Mr. Rushton Parker, I succeeded in enucleating tolerably completely, though a hard cord-like band in the roof of the prostatic urethra was only imperfectly scraped away with the finger. The mass removed was about the size of the last phalanx of my thumb, and was evidently a new and rare growth. The exploration of the bladder was not as complete as I could have wished, notwithstanding the viscus was well pushed down towards my finger from above the pubes. The removal of the tumour was not attended with any serious hæmorrhage, it not being necessary to tie a vessel. The patient suffered very little from the operation. As the urine now passed entirely through the wound, the patient was able to enjoy what he had not had for many months—namely, uninterrupted sleep. On the third day after the operation the urine was clear from blood and remained so for ten days, when it again returned in a small quantity, and finally disappeared. On Dec. 1st the patient was able to leave the infirmary, the perineal wound having almost entirely healed; he had not complete control over his bladder.

On Dec. 15th he returned to the infirmary for relief, by reason of some preputial irritation which had been caused by the use of a rubber urinal. The dresser's report is as follows:—"The urine is free from blood, and all comes by the urethra.—Dec. 20th: A rubber catheter was tied in the bladder for a few hours daily.—Jan. 8th, 1883: The patient is in much the same condition, but he is able to retain his urine for about half an hour. He was measured by Mr. Reynolds, the surgical instrument maker, for a urinary truss, made after Mr. Harrison's directions, with the view of providing against the incontinence.—12th: The patient was fitted with the truss yesterday afternoon. It consists of an ordinary leather-covered truss-spring, terminating in an ivory ring, well padded, through which the penis is passed, the object being to exercise steady pressure on the urethra immediately below the arch of the pubes. It was found that this apparatus completely restrained the escape of urine and enabled the patient to get about his business with comfort. Before leaving the infirmary on Jan. 24th, it was noticed that so effectual was the truss in controlling the escape of urine, that a slight leakage through the perineal wound took place, which required some few applications of nitrate of silver. On the 19th Mr. Harrison introduced the patient at his clinical lecture for the purpose of demonstrating the use of the urinary truss and in illustration of his remarks relating to the case."

This patient lived comfortably for fourteen months after the operation. He had no recurrence of the hæmorrhage, and partially resumed his occupation as a stevedore; then the glands in his left groin began to enlarge extensively, and in two months more he died.

I am indebted to my dresser, Mr. Cooke, for the notes of this case, and to Mr. Paul for the following report of the tumour:—

"The piece of tumour hardened for microscopical examination was the size of a small filbert, and was rather less than one-half of the whole bulk of what was removed. It was softer and more fleshy in appearance than normal prostate, and was plainly to the naked eye a new growth. Microscopically, the portion examined consists of prostatic tissue, infiltrated with carcinoma, except along one margin, where the normal prostatic structure is unaltered. The growth is spreading both by direct extension along the gland tubes, and as a cellular infiltration of the stroma. The carcinoma is of the acinous variety, the general appearance resembling an ordinary scirrhus of the breast. The cells are from two to three times the size of a pus cell, and some contain more than one nucleus. Those next the basement membrane are in places elongated and more regularly arranged. The alveolar stroma is very rich in cells, and in many places shows a number of non-striated muscular fibres. The growth may be considered to have originated in the prostate, and not to have spread to it from the bladder, as it is very doubtful if an acinous variety of carcinoma ever originates in the latter."

Such, gentlemen, are the chief features, clinical and histological, of a case of more than usual interest and rarity. Though the operation which was performed may not have cured the patient, it has been the means of prolonging life, and rendering its continuation less distressing than it pre-

[1] Trans. International Medical Congress, London, 1881.

viously was. That the growth was of a rare kind must be evident to all who have any acquaintance with the enlargements and tumours to which the prostate is liable. That the proceeding adopted was the only means of affording relief I have not the least doubt, nor was the risk incurred a great one to run. On more than one occasion I have opened from the perineum the bladders of persons suffering from malignant disease with considerable benefit. No condition can be more distressing than that of malignancy associated with difficult micturition, hæmorrhage into the bladder, and the constant catheterism that these entail. If my incision in the case brought under your notice to-day had only temporarily relieved these symptoms, the continuance of which could only have brought about a speedy termination, without permitting the removal of the growth, even then something would have been gained by it. The means successfully employed for providing against the incontinence which resulted is also worthy of your attention, as the principle might be extended to other circumstances. I have often noticed how slight a pressure applied over the urethra at the root of the penis will effectually stop micturition. The application of this principle by a truss suggested itself to me as being a likely, if not an entirely novel, means of affording the remedy that was desired.

ON THE

RHEUMATIC ORIGIN AND THE TREATMENT OF CHOREA.

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THE several enumerations with reference to the incidence of rheumatism in chorea which I have communicated to THE LANCET from time to time are now brought to a close, owing to the routine of promotion among the medical staff at the Hospital for Sick Children. I wish, therefore, to make a final communication upon the subject, and to indulge in a retrospect.

Since my last communication (Nov. 10th, 1883), there have been but seventeen cases to add to the 202 already recorded. These furnish four which, upon the principle which has hitherto been pursued, may be put to the rheumatic account—viz., one that had had rheumatic fever, two that had had joint pains presumably rheumatic, and one swelling of the feet and legs not further described, but which we also assume to have been rheumatic. In none of the four did the rheumatism appear to be the immediate cause of the chorea.

The total number of cases, the product of ten years' observation, is thus brought up to 219. Of these sixteen had had rheumatic fever, twenty-five to twenty-eight pains presumably rheumatic, and twelve were without information upon the point. Let us suppose that forty-two were really rheumatic subjects, we should then have the rheumatic proportion represented by very nearly 20 per cent.—hardly more than a third of these being cases of acute rheumatism—and a statement I ventured to make some years ago upon a review of a smaller number of patients that "chorea had nothing to do with rheumatism in three-fourths of the cases," would be still borne out.[1]

But if, without stickling for precise numbers, we assume that from 20 to 25 per cent. fairly represents the rheumatic proportion among choreic children, we have still to consider how that proportion compares with what I have called the *normal* incidence of rheumatism. For it is not (as was urged in my last paper), the percentage of rheumatism taken absolutely which represents the chorea proclivity; it is the excess of this percentage over the normal incidence among children of like age. It was roughly estimated that the normal percentage of rheumatism to be attributed to the community at large was for adults certainly over 12, and possibly over 20 per cent., while for children it was estimated at about 15 per cent. Since that was written my friend Dr. Coutts has taken up a similar inquiry at the East London Hospital for Children, and has been good enough to furnish me with the result in 194 cases, the number collected up to the present time. The method followed was this. The out-patients were taken consecutively and without selection (excepting only infants), the youngest three, the oldest fourteen. The question first asked in each instance was whether or not the child had had any pain in the joints at any time during its life. In case of a negative answer and in the absence of erythema or tonsillitis, the patient was dismissed as probably non-rheumatic. In case of an affirmative reply further questions were put as to the age when the pain first occurred, the joints chiefly affected, the duration of the pain, and whether or not swelling or redness accompanied it; finally, a careful examination was made of the cardiac sounds. By this method the children probably rheumatic got grouped into three classes, (1) those that had had joint pain only, (2) those that had pain with swelling of joints, (3) those that, besides these two, had moreover at the time of examination a cardiac bruit. An inquiry thus carefully devised, and which, instead of applying names, gives the reader the precise material he is in want of, is, as far as possible, secured against error. It has in this case the further advantage of being undertaken by one who has an open mind upon the point at issue.

The general result may be stated as follows. Of the first 100 patients, twelve had chorea, and are therefore excluded. There remain eighty-eight. Of these six had had joint pain and swelling; three had had joint pain with swelling, and had at the time of seeing a cardiac bruit; three had had joint pains without swelling, but had a cardiac bruit; three had had joint pains of an indeterminate kind. Thus, upon the plan of reckoning hitherto followed, fifteen out of the eighty-eight gave evidence of rheumatism; or if the three with joint pain merely be excluded, then twelve out of the eighty-eight. Of the second series of ninety-four; fourteen had chorea, and are accordingly excluded.[2] Of the remaining eighty, five had had joint pain with swelling, and had at the time a bruit; two had had joint pains and swelling; nine had had joint pains only; one had had bruit pains and one had a cardiac bruit. Excluding these two last we have sixteen of the eighty presumably rheumatic. It is true that the numbers with joint pains alone are a large proportion of the whole. Yet even if we assume that more than half of these (five out of the nine) were not truly rheumatic—a concession which is beyond the terms of the calculation—we have still twenty-six rheumatic out of 163 patients. This is more than 15, it is close upon 16 per cent. The figures go to prove that for children in general the allowance of 15 per cent. of rheumatism which was arrived at in my last paper was rather an under- than an over-estimate. It is only the broad conclusions, however, that need be insisted on. They are these—

If, on the one hand, without insisting upon less equivocal evidence of rheumatism, the mere occurrence of pains in the joints be accepted in that light, then such evidence is to be met with in full 15 per cent. of our London children taken as they come, and in about 20 per cent. of choreic children. The statement, therefore, that three-fourths of choreic children have *personally* (the word is needed to keep clear of the question of inheritance) nothing whatever to do with rheumatism has to be supplemented by this further statement. Rheumatism does not befall choreic children exclusively. It is a very wide possession, and here in London falls to the lot of three out of twenty. The special proclivity to chorea arising out of rheumatism is represented, therefore, not by 20 per cent., but by 5 per cent. If, on the other hand, more trustworthy evidence of rheumatism be required than joint pain of itself affords—swelling, redness, and tenderness of the joints (with or without cardiac bruit)[3]—

[1] From the admirable Abstracts of Medical and Surgical Cases, published annually by the Pendlebury Hospital for Sick Children (copies of which have been kindly sent me by Dr. Ashby, the senior physician, and Dr. Chaffey, lately medical officer at that institution), it appears that in the years 1881-83 there were 112 cases of chorea admitted; seventy-seven of these had no rheumatism, eight were doubtful, twelve had had pains doubtfully rheumatic, fifteen were beyond reasonable question rheumatic subjects, four of these having had acute rheumatism. Now, if the above supposition as to the three-fourths proportion be true, eighty-four of these 112 patients should have nothing to do with rheumatism, and seventy-seven are so given by positive statement. We want seven more; and, surely, as many might be allowed us of the twelve who were doubtfully rheumatic and the eight doubtful altogether. Working upon the largest estimate, we find twenty-seven rheumatic among 112—less than one-fourth. The Collective Investigation Committee, in their Preliminary Report on this subject, have thirty-one in 128—again less than one-fourth (Collective Investigation Record, July, 1883).

[2] As an independent observation, Dr. Coutts in his report remarks upon the very large proportion of chorea which these figures indicate; and expresses the opinion that the affection is unusually prevalent among the children of the poor in East London.

[3] Were the question to be settled upon the evidence of heart murmur, we might say without reserve that almost every choreic child is also rheumatic, for nearly every one at some time or other exhibits this symptom. It is mainly by the varying weight given to it that testimony is so various and conflicting.

that is to say, acute polyarthritis, then, whether we take children as they come or choreic children, the percentage of such cases is extremely small (I do not think we are in a position to state it even approximately), although it may, perhaps, be admitted that it is somewhat higher for the choreic than for the non-choreic.

If calculations such as these are anywhere near the truth (they do not profess to be an exact statement of it), it is impossible any longer to represent rheumatism as the grand fact and basis of chorea. Such a view of the affection would be untenable even had we to say that the rheumatic element was more often absent than present. We have to say much more than that. The etiology of chorea must find some broader basis than any that rheumatism affords. And when this is admitted, and rheumatism takes its proper place as one amongst many agencies, predisposing to chorea, if not directly producing it, then and then only can its pathology, and what is much more, its treatment, be rationally determined.

And here I should conclude; but this view of the practical importance of what may seem to some a barren inquiry lengthened beyond measure tempts me to add one word more. These 219 children that have formed the text of these papers were all under close observation for some time, observation which was not confined to the single question of rheumatism, and which spread over more than ten years. And the children had to be treated as well as observed, if possible to be cured. Many of them were stubborn and chronic cases. Many had been under special treatment, chiefly by arsenic, up to the time of their arrival, when such treatment was suspended in favour of that to be presently described. Some few relapsed, but no child had to be sent back to Ormond-street owing to its complaint returning in acute fashion. The majority made rapid improvement from the first. All ultimately recovered. We have thus ten years' unbroken experience, and it is all of one tenour. I do not say that nothing could be better, because there is the element of time to be considered. But does time matter much, or if it did, is it reasonable to expect that an affection of this kind can be cured in a hurry? Chorea is not painful or actively injurious unless you make it so. It is, indeed, in a measure preservative, a signal of distress giving timely warning of overstrain. The business concerns of these little children are not of great moment, and inasmuch as not rheumatism, but nervous shock, overwork, or alarm, or ill usage, is often the direct cause of their complaint, it is inevitable, as the experience of the whole world teaches, that time should be granted as one of the conditions of cure. But putting time out of the question, and taking the entire material dealt with over ten years, we have but one result to record—namely, recovery. That is almost as good as saying that under the treatment adopted chorea always recovers. I put aside that extreme form of the disorder which is so rare that it is impossible to speak precisely about it, but of which, as I have shown elsewhere, the treatment in question can give as good an account as any other; and I say, what other treatment than ours is needed, or, indeed, justifiable, for chorea in general, unless it can claim to reach as good a result in shorter time?

And what is the treatment? If, after saying so much, I were to go on to describe the particular medicinal agent that had been employed, I appeal to the reader's candour to say whether or not he would begin to respect that drug, and admit that a very good case had been made out in its favour. But when I go on to say, as I must, that the treatment adopted was rest, bodily and mental, good food, country air, patience and encouragement, treatment as yet in want of a name, I know very well that, far from putting such treatment upon any equality with drugging, many a reader will turn away as though some deceit or cajolery had been put upon him.

Wimpole-street.

FIRE AT A COUNTY LUNATIC ASYLUM.—On the 15th inst. a fire of an alarming and destructive character occurred in the grounds attached to the Surrey County Lunatic Asylum, Wandsworth Common. The discovery was made among some timber stores, and but little time elapsed before the flames began to make considerable ravages. The firemen had to contend with great difficulties, owing to the great distance of water, of which there was a bad supply from the asylum, and about three hours elapsed before the fire was virtually got under. The cause of the fire is not known.

ON THE

DISEASE OF THE SKIN NAMED "PITYRIASIS MACULATA ET CIRCINATA."

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THE affection under consideration has not hitherto, I believe, been described in England, and my own attention was redirected to it by a paper in the *American Journal of the Medical Sciences* of Oct. 1880, in which Dr. Duhring gives careful independent descriptions of six cases observed by him in adults, and refers to the few existent notices of the affection which he had met with in the course of his researches. I shall deal at present only with the affection as seen in children, because my experience of it in adults is, so far, limited to two cases. Dr. Duhring, in his easily accessible paper, has given exhaustive extracts from the writings of Bazin and Hardy, and of Horand of Lyons, who first described the "pityriasis circiné" in children, so that I shall not repeat these references at length; but whereas Dr. Duhring writes that, "to Bazin, I think, undoubtedly belongs the honour of having first described it," I will establish Gibert's claim by giving the latter's account of pityriasis rosea (referred to by Bazin) from p. 402 of the third edition of the "Traité Pratique des Maladies de la Peau," 1860. C. M. Gibert thus sums up the characters of the disease in adults and youth: "Little furfuraceous, very slightly coloured, itchy, irregular macules, scarcely exceeding a finger-nail in size, numerous and thickly set, although separated always by some interval of healthy skin, distributed upon the upper part of the body and in preference upon the neck, the upper part of the chest, and the upper arms, but possibly invading regions beyond, even to the thighs, in such a manner that the total duration of the eruption, which dies out gradually in the regions first attacked *pari passu* with its further extension, is prolonged ordinarily for six weeks or two months. This eruption, more common in the female than male, is noticed frequently during the warm season. It scarcely shows itself in youth or in persons with a white, thin, and delicate skin." Further on, p. 410, he adds that the little macules are rosy or approaching the colour of erythema if the inflammation be very active, very slightly raised, at first of little extent, but afterwards enlarging, approaching one another, and even coalescing. It is to be remarked that Gibert does not mention the ringed form. He carefully distinguishes the affection from erythema, in which the lesions are less extensive, more prominent and profound, and from psoriasis, in which the plaques are more prominent and injected, rounded and shining, and the scales larger. No fungus was ever found by him.

Bazin[1] writes that it is a trifling idiopathic affection terminating spontaneously by resolution, in acute cases after a duration of from ten to fifteen days, and in others after from six to eight weeks, but never becoming chronic. He mentions the existence of prodromata, and describes a second ringed phase of the eruption. Hardy[2] draws a word picture of the circinate variety. Both writers carefully distinguish the affection from "herpès circiné" (tinea circinata) and psoriasis. So far the eruption was noticed in adults and youth, but in the *Annales de Derm. et Syph.*, tome vii., 1875-76, Horand of Lyons recounts seven cases in children, and his description tallies so closely with the cases I have observed that it was impossible to doubt that I had to deal with the same affection. He, like the other writers, failed to find any fungus, and considers the name "pityriasis circiné" the most suitable. He identifies it with the "pityriasis circiné" of Hardy, but not with the pityriasis circinata of Bazin. Now, Dr. Duhring has brought forward a strong case for grouping all these phases under one heading. With such a limited experience I do not feel in a strong enough position to satisfactorily offer criticisms on this point; but I am quite positive the cases I have seen in children are similar to those Horand described. I will only mention the circumstance that Bazin was very hazy as to what Willan and his followers described

[1] Les Affections Génériques de la Peau, 1862.
[2] Leçons sur les Maladies Dartreuses. Third Ed. 1868.

and figured as roseola annulata.[3] Rayer thought it an erythema annulatum, and Bazin, after saying he had never seen it as Bateman describes it, adds, "Roseola annulata is no other, in the majority of cases, than the affection described by us under the name of pityriasis circinata amongst the arthritides pseudo-exanthémiques." Dr. Allan Jamieson of Edinburgh has also noticed the affection. Lastly, I must mention Vidal[4] as a writer who seems to be well acquainted with the affection. In his experience the eruption rarely lasts longer than from five to six weeks, and he observed that the desquamative plaques were preceded for a very short time by raised, congestive, erythematous plaques or papules, not yet exfoliating; and, moreover, that some spots carried quite thick epidermic scales, which separate *en masse*, leaving a little collaret adherent at the periphery, whilst sometimes slight moisture exudes or a little crust forms. In a later paper[5] Vidal further describes a special parasitic form of P. circinata et marginata met with in persons from six and a half to thirty-five years of age, distinct from Gibert's P. rosea. The fungus which he names "microsporon anomœon vel dispar" is very minute, having an average length of a thousandth of a millimetre. The rounded spores have an irregular outline, and lie in irregular masses and groups, very rarely in chains amongst the epithelial cells of the superficial and middle layers of the epidermis, whose cohesion they undermine. Mycelium is absent. Vidal distinguishes this fungus from the minute spores (? Torula vulgaris) so commonly found amongst the epithelial cells of the skin.

Of the five cases which I have recognised without hesitation in children, I will here give a fair example, as all have been marked by a close uniformity.

Blanche G——, aged seven years, came under my care at the Westminster Hospital on January 24th, 1884. Her mother declared she had not suffered from any infectious disease, and that all the other children were well, and continued so. The eruption had existed for three weeks, and was preceded by a fright three days previously, and also a slight cold and sore-throat, but no running from the eyes or nose. The eruption seems to have evolved mainly in the night. The mother stated that the eruption came out in successive crops, increasing for some days; that it appeared first over the back and shoulders, the axillæ and abdomen; that the face was affected later on, and the dorsum of the hands last of all. The scalp also was involved and tender. The spots were moderately itchy, rounded, rosy-red in colour, mostly the size of a split pea, with some smaller ones interspersed. The appetite and general health were excellent. The eruption paled on exposure to the air, but after a bath the colour revived. When I saw the child the face, with the exception of the forehead, the scalp, the neck, the trunk, the arms and hands, except the palms, and the legs down to the knees were covered with thickly disseminated, fading, roseolous, slight desquamating macules about the size of the little finger nail. The mouth was free. The eruption was usually discrete, but over the shoulders, trunk, and back of the neck the eruption was exceedingly closely set, and even coalescent here and there. In some places, chiefly on the limbs, slightly but distinctly raised, faint rosy, crimson or brick-red, freshly evolved macules were conspicuous, from a split pea to a finger nail in size, of rounded or oval but somewhat irregular outline. A minority of the lesions were obviously ringed, by reason partly of the fading colour and partly of the subsidence of congestion of the central parts. The majority, however, faded throughout, leaving slight desquamation or roughness, more conspicuous in certain incidences of the light, and some pigmentation, reminding one strongly of certain phases of tinea versicolor. The scaling was very constant and characteristic, for, though far more delicate than that of psoriasis, it instantly attracted notice. The eruption gradually died away in about a month after I first saw it.

This case is a fair example of the rest, which I will not occupy space here in detailing. I have never been fortunate enough to observe the very earliest crops of eruption, but the histories I have obtained go to show that the macules may evolve primarily on the limbs or trunk, that it bursts out in profusion and pretty acutely, and is continued irregularly in a lessening degree for several weeks. I cannot say I have noticed with Gibert that it always commences on the chest and fades in the older parts *pari passu* with its extension elsewhere. The eruption has its chief centre of incidence on the upper part of the trunk and upper arms. Each macule commences as a rosy, very faintly raised, congested macule, the size of a pin's head or lentil, and extends to that of a finger nail, scanty fine adherent scales soon forming, and a considerable number of lesions becoming ringed. The bright colour fades and the macule gets to look like roughened discoloured spots which often bear, especially when confluent, a close resemblance to tinea versicolor. Each macule appears to last for several weeks and leaves behind on its disappearance some roughness and pigmentation. I have never observed any febrile excitement nor constitutional symptoms of moment, although the subjects were pallid.

In conclusion, I must add one word on the diagnosis. To the eye it is not such a bold eruption as psoriasis, nor are the scales so thick, prominent and silvery, nor is the distribution similar, though it is well to remark that we sometimes see an acute general evolution of psoriasis, in which the eruption is small, and far less prominent and scaly than in the usual run of cases. Then it is not a parasitic disease, at least no one has yet discovered a fungus. The affection to which it approaches closest is roseola annulata. It is certainly an eruption of the roseolous type, but quite distinct in aspect and course from the varieties of ephemeral roseola described and figured by Willan and his followers and well known to us. It is often strongly suggestive of the acquired roseolous syphilide, a point not referred to by authors, and a real difficulty might easily occur where corroborative signs of syphilis were not present, as I had the opportunity of observing in a case of either disease which simultaneously presented. The roseolous syphilide, it is well known, may be ringed, and I would refer to the coloured illustration in the *Clinique Photographique* (Hardy and Montméja) of the thighs and trunk of a patient covered with regularly circumscribed, rosy circles, with a yellowish tint, one to three centimetres in diameter. Such an eruption, the authors say, may last two, three, or four months, and relapse six, ten, or fifteen months after the initial lesion. Fournier's observations also on the very tardy circinate roseolar syphilide are very interesting.

Harley-street, W.

[3] See Willis's Atlas. [4] Du Pityriasis, Progrès Méd., 1877.
[5] Ann. de Derm. et de Syph., Jan. 1882.

SOME REMARKS ON THE

TREATMENT OF DEFORMITIES OF THE NOSE FOLLOWING INJURY.

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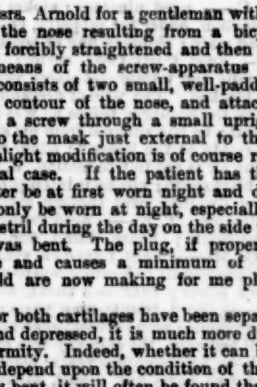
DURING the last few years I have had a considerable number of cases of deformities of the nose due to injury under my care; and as the treatment of such deformities is but lightly touched upon in works on surgery, it may be interesting to some to learn the result of my experience. It is not my intention here to speak of recent injuries of the nose, as the deformities with which I have had more especially to deal have been the result of injuries received months or even years previously. For convenience of treatment they may be divided into those affecting, first, the lateral cartilages and, second, the nasal bones.

1. *The cartilages.*—These may be variously bent or twisted to one or other side, or they may be depressed at the spot where they join the nasal bones, giving the nose in this instance a sunken appearance. In the former case the septum nasi (the central column of support) will as far as I know be always found deflected in a direction opposite to that of the bent lateral cartilage, blocking up more or less completely the corresponding nostril. In the latter case—i.e., when the cartilages are depressed, the septum may not only be deflected, but also, as is unfortunately too often the case, fractured with lateral displacement of the fragments, or else dislocated from the maxillary crest. In addition to the deformity, therefore, there will exist the usual train of symptoms accompanying nasal stenosis from other causes—i.e., a sensation of stuffiness in one or both nostrils, a nasal tone of voice, &c. In neither class of cases will either operative or mechanical treatment alone suffice. The septum must be straightened, and the lateral cartilages at the same time be forced into position, and there retained by mechanical apparatus till the septum has had time to consolidate. For

retaining the septum in position, in my earlier cases I used Adams' retentive apparatus, modified so as not to injure the columnella. More recently I have had an instrument made of vulcanite, which, however, is open to the objection that the vulcanite is apt to become softened by the heat of the nose, and lose its shape and retaining powers. The advantages of the softer vulcanite may be obtained by having the blades of a steel instrument coated with this material. For solid ivory plugs I have now substituted hollow plugs of vulcanite, which can be worn with greater comfort, as they allow the patient to breathe through them. Many forms of retentive apparatus for holding the lateral cartilages in position were used before I found one which fulfilled all the indications. At first the ordinary nose-truss, which is fastened to the forehead by a band round the head, was tried. This, however, proved of little service, inasmuch as it is liable to shift, and thus give no fixed point to work from. The same objection holds to the spectacle method of fixing the truss. At length this difficulty was overcome by having a mask accurately moulded to the face. A plaster-of-Paris cast is first taken of the face, and in this the leather for the mask is moulded, apertures being left for the mouth, eyes, and nose itself. The mask when thoroughly dry is lined with soft chamois leather, and fits accurately to the irregularities of the face, so that no movement can take place. It is secured by suitably arranged straps around the head. Having thus obtained a fixed point to work from in the mask, it is easy to bring pressure to bear upon the nose in any direction required by means of suitable screws, springs, &c., attached to the mask. The accompanying woodcut is an illustration of a mask made



for me by Messrs. Arnold for a gentleman with very marked deformity of the nose resulting from a bicycle accident. The nose was forcibly straightened and then maintained in position by means of the screw-apparatus shown in the woodcut. It consists of two small, well-padded steel plates shaped to the contour of the nose, and attached by a universal joint to a screw through a small upright fixed at a proper angle to the mask just external to the aperture for the nose. A slight modification is of course required to suit each individual case. If the patient has the leisure, the mask had better be at first worn night and day. In slight cases it need only be worn at night, especially if a plug be kept in the nostril during the day on the side towards which the septum was bent. The plug, if properly applied, is hardly visible and causes a minimum of inconvenience. Messrs. Arnold are now making for me plugs of a flesh colour.

When one or both cartilages have been separated from the nasal bones and depressed, it is much more difficult to overcome the deformity. Indeed, whether it can be overcome or not will then depend upon the condition of the septum nasi. If it be merely bent, it will often be found that on straightening it the depressed cartilage will be raised along with it into position; but if it be fractured or dislocated, it will be difficult, if not impossible, to replace and retain in position the displaced fragments, and hence the necessity to provide a natural support for the depressed lateral cartilages. Even when the septum has been only bent, and not fractured or dislocated, it is not always easy to keep the reposited cartilages in place. They may be readily restored to their natural position by the use of suitable levers and forceps; but after a few days, when the swelling due to manipulation subsides, they will often again sink to their former faulty position. As long as the patient keeps his bed they may be retained in place by making extension on the nose by strips of strapping fixed stirrup-wise on either side of the nose, and then attached through a cord to a weight working over a pulley at the foot of the bed. The objections to this, however, are obvious, and similar ends can be obtained by an apparatus in which the extension is made from the forehead—or better, from the frontal part of the mask. Another method of maintaining the cartilages in position is by levers attached to the mask and introduced into the nostrils—a method, I confess, somewhat objectionable on the score of the pain and irritation which a foreign body gives rise to in this part of the nose, and which can only be overcome by patience and frequent introductions of the levers for short intervals at a time until the mucous membrane becomes accustomed to the irritation. Great care must also be taken that only the gentlest pressure is made, otherwise there is danger of ulceration.

In many of the cases of depression of the cartilages with fracture and displacement of the septum, do what we will but little improvement of the deformity can be obtained; but we should not forget that even here the removal of the displaced fragment and consequent freeing of the obstructed nostril, though it may not much improve the appearance, will give great comfort and relief.

2. *The nasal bones.* — These, like the cartilages, may be merely bent to one or other side; or they may be variously fractured and depressed, often presenting from the sinking in of the fragments and heaping up of callus much deformity. A full account of their treatment space does not permit me to give here. I would only remark on the comparative use with which, even after many years, laterally displaced bones may be forced into position. Unlike the cartilages when once rectified, retentive apparatus to keep them straight is not generally necessary. All that is then usually required being to keep the septum in position by one of the methods that have already been described.

Weymouth-street, W.

ON SOME POINTS IN THE ETIOLOGY OF PNEUMONIA AND BRONCHITIS.

BY JOHN WARD, M.D.,
LATE MEDICAL OFFICER OF HEALTH IN WEST CUMBERLAND.

NIEMEYER says, the exciting causes of pneumonia are generally obscure, but that at times it becomes of frequent occurrence, together with other acute inflammatory disorders, attacking their victims without any obvious provocative, through the operation of unknown atmospheric and telluric influences. We particularly observe the epidemic occurrence of pneumonia in severe and protracted winters, during the prevalence of north-east winds, yet sometimes it arises under conditions the very reverse. The statistical statements as to the greater frequency of pneumonia in northerly and elevated localities have of late been regarded as untrustworthy. With regard to the influence of cold, it is difficult to decide in individual instances whether the attack has been preceded by an exposure to cold more severe than that to which the patient has repeatedly exposed himself with impunity. Opinions, therefore, are divided as to the effect of cold in producing pneumonia. Its secondary forms, he says, occur under the influence of an acute dyscrasia, just as catarrh, as we have learned, attacks the air-passages in measles, exanthematic typhus, &c.; and whilst full-blooded, vigorous subjects are not exempt, yet feeble and broken-down subjects, convalescents from grave diseases, and those who have repeatedly suffered, are, perhaps, more liable to be attacked; and that it often complicates diseases which have already effected an impoverishment of the blood with emaciation and constitutional exhaustion. The same author, when speaking of the etiology of *catarrhal* pneumonia, reminds us that in many cases it arises solely through extension of the morbid process from the bronchial mucous membrane into the air vesicles; that the disease is most commonly observed as a companion of measles and of whooping-cough, assigning as a reason of this that capillary bronchitis occurs much more frequently in the course of these complaints than in healthy children. Causes of catarrhal pneumonia other than those from which capillary bronchitis and collapse of the lung originate are unknown. Again, speaking of the causes of hyperæmia and

catarrh of the air passages and bronchial mucous membrane, he says that in very many cases the exciting causes of catarrh are unknown; hence we have recourse to hypothetical statements, such as "an increased susceptibility of the skin to change of temperature," "an augmented vulnerability of the mucous membrane," because we have no other explanation at hand. Whilst admitting the presence of certain predisposing conditions, such as the period of dentition in children, and noticing the frequency with which the symptoms are increased as age creeps on, he remarks, very appositely, that "this predisposition probably depends on the feebler capacity for withstanding noxious influences," and, more noticeably, that "the liability to this affection is less among those who inure themselves to exposure."

The opportunity afforded for the careful investigation of the physical surroundings of many fatal cases of pneumonia and bronchitis, during a limited period of office in the Public Health Service, has forcibly impressed me with the truthfulness of these statements of the learned Professor at Tübingen; and I have been accordingly led to trace a seeming correspondence with defective renewal of the air within, during the night especially, and the fatality from bronchitis. Nay, even as if, given the constitutional vigour of the patient and the amount of departure from the health standard of air-supply, results might almost permit of calculation, with some degree of accuracy, especially if other depressing influences could have been estimated. Not less worthy of note is the statement of the same author, amid the obscurity involving the etiology of pneumonia, which, I doubt not, he would admit as alike applicable to both diseases under consideration, touching those noxious influences which, from their enfeebling effect, diminish the resisting power of the system against the attacks of disease.

Calling to mind how frequently this malady occurs during the progress of certain zymotic affections, and remembering how often this class of diseases is associated with a filth-contaminated atmosphere, we might be led even to infer a somewhat similar association of assignable causes; and, indeed, the results of observation would seem to give substantiality to the deduction. My observations are herein confined to an urban and rural district, in the north-west of England, where, moreover, there is a heavy rainfall, and where the houses, generally, are of a more substantial character than the brick structures of the Midlands; and, also, where the dense nature of the building material permits of but little interchange of air through its pores. Many of the houses are old-fashioned in style, containing bedrooms, cul-de-sac fashion, with door and window at one end, and not infrequently having no fireplace and chimney flue which would serve for ventilation. The urban districts, possessing the advantages of general sewerage, are nevertheless exposed to the prejudicial arrangements of waterclosets, with their unventilated drain-sections communicating therewith, placed within or immediately contiguous to the cottages, the atmosphere of which, from their smaller size, was proportionately the more polluted thereby, especially where the house sections were subject to deposit, as is unfortunately the case so frequently; a defect, by-the-bye, which I think might be largely avoided by increasing the distance of the open channel, which should intervene between the end of the discharge-pipe and the sewer inlet, so as to favour the deposit of greasy sediment on the surface, where it might be easily removed; not to speak of the advantage secured by keeping the sewer a greater distance from the house-foundation, and thereby obviating the danger of fouling the air within.

The following examples are selected from a large number of fatal cases of disease, of a varied character, which I had learned would be likely amply to repay the trouble of investigation, if but suggested improvements could be effected, occurring during the last year of my tenure of office, the year 1880, the winter months of which year were very severe, and the cold of which would have tended rather to intensify sanitary, structural defects by favouring a determination towards the warmer air within doors from adjacent sewers, &c., as well as to favour the generally accepted idea of the increase of such diseases with the occurrence of cold. They are taken from notes which I made on the spot at the time of inspection, the cause of death being put down as reported on the duplicate certificate furnished by the local registrars; and it may be supposed their enumeration and careful study will have a tendency to convince the most sceptical that insanitary influences have a much wider and further extended causative relation to disease than is generally acknowledged, and, consequently, it is hoped, tend to strengthen the admission of the necessity of taking into consideration the surroundings of the patient more frequently by the medical attendant, as alike widening the field of etiological inquiry, according to therapeutical agents, their truer value, and more particularly affecting prognosis, ever bearing in mind the oft-repeated injunctions of the above-mentioned erudite professor, to seek to "fulfil the causal indications," not unmindful of the aphorism *sublata causâ tollit effectus*; our aim being ever to secure, as far as possible, the physical prerequisites of health, not merely wholesome food and good water but a pure house-atmosphere to breathe. Chemists have been able to detect comparatively little chemical difference between the amount of oxygen in the atmosphere of our towns and in pure mountain air; but far otherwise is it when the foul air within our tenements is subjected to their severer tests; and can the physiologist be slow to recognise the effect on the delicate human organism of being continuously subject to its direful operation? The earnest prosecution of sanitary work, it is greatly to be regretted, does not meet with the encouragement on the part of the several sanitary authorities which its importance demands; and already there is the danger, but too apparent, as Dr. B. W. Richardson has observed,[1] "of a most enlightened and useful service degenerating into that of the office of mere clerks or chroniclers of disease; suggestors of placebos; gentlemen of education engaged by money for incomplete service."

When we have boards of health impressed with the greatness of their beneficent duty, advised and served by men alike imbued with its importance, who are not, as now, subject to the fickle caprice of their employers, and treated too often as abject menials, we may hope to attack the strongholds of disease, one after another, with method and success, and win for the Public Health Service the laurels which a timorous administration has tended to keep back. Out of a population of about 50,000, I have notes of some sixty fatal cases of pneumonia and bronchitis, for the year which is at my disposal, some of the cases being complicated with other diseases, in all of which I observed tangible sanitary defects, which I have attempted to detail as follows:—

R. D——, aged forty-three; carter; pneumonia; cottage, the bedroom of which forms a cul-de-sac and has no fire place, adjoins the fever wards of the workhouse, the sanitary arrangements of which are defective, the sewer sections and soil pipes of the waterclosets in connexion therewith being unventilated. J. D——, aged fifty-six; pneumonia; drain, into which eaves spouting enters, close to back door, out of repair, emitting foul odour; watercloset, the sewer section leading to which is unventilated, immediately adjoins outer kitchen. J. G. C——, aged nineteen; stoker; congestion of lungs; sewer section, under the property, connected with imperfectly flushed main; chimney flue of bedroom papered over. W. T——, aged thirty-two; carter; pneumonia; drain from yard gully and watercloset placed very near back door, repeatedly blocked. The wife of deceased said, "He complained only on the Saturday before he was laid up that the smell was awful; he had suffered from his stomach ever since coming to reside at the house"; odour upstairs very offensive, when the air is not in free motion. J. H——, aged forty-one years; blacksmith; alcoholic intemperance; pneumonia; cottage or dwelling over shoeing shed; defective ventilation of bedrooms. T. K——, aged twenty-six years; steelworker; pneumonia; house damp and imperfectly ventilated. J. C. M——, aged forty-two years; nurseryman; erysipelas; pneumonia; slopstone waste-pipe in direct contact with town sewer; bedrooms small, some without fireplaces. J. G——, aged twenty-nine years; black-lead pencil maker; pneumonia; house overcrowded and damp; six slept in one small bedroom, the chimney flue of which was stopped up. W. P——, aged eighteen years; black-lead pencil maker; empyema two years and a half, albuminuria one year, dropsy six months; deceased occupied a small tenement at the rear of a block, the diminutive bedroom of which was placed over an offensive watercloset, the drain section of which was unventilated—a sad place. J. W——, aged forty-five years; painter; pneumonia; slopstone waste-pipe communicates with sewer; watercloset, with unventilated drain section, adjoins the dwelling. M. N. P——, aged nine months; whooping-cough; pneumonia; house large and commodious, but built by the side of a large stable, where a number

[1] Journal of the Society of Arts, March 28th, 1884.

of horses are kept; the slopstone waste-pipe communicates directly with the sewer; watercloset with offensive "container" apparatus, and unventilated soil-fall-pipe in the centre of the house. The children, the offspring of healthy parents, had here suffered much in health, which greatly improved on their removal to a healthy house. S. D——, aged nine months; pneumonia; the drain passes under the house. Some time previously scarlet fever spread through the village from this house as a centre. J. B——, aged seventeen years; scarlet fever, pneumonia; the middenstead of a neighbouring farmer placed almost close to the dwelling. W. B——, aged three years; pneumonia; the village sewer courses under one corner of the cottage; bed placed in recess of small room. J. W. S——, aged three years; pneumonia; bed placed in corner of badly ventilated room; a cow-house adjoins the end of the row of cottages of which this forms a part. M. J. G——, aged thirty-six years, innkeeper; delirium tremens; drain passes under the premises, and filthy stable immediately adjacent to cottage, which intervenes; husband of deceased died some months previously from pneumonia. J. A. F——, aged fifteen months, son of a greengrocer; pneumonia; offensive drain adjacent to dwelling; bedroom without fireplace; quantity of decomposing onions in the house. A. B——, aged fifty-eight years, death not registered as to cause; on inquiry judged to be pneumonia; deceased, a farm servant, lived at the time of his death at a farmhouse which adjoined an offensive stable, close to the loft of which the bedroom in which he used to sleep was situated, the chimney flue of the same being stopped up. T. B——, aged sixty-five years; double pneumonia; watercloset with unventilated sewer section underneath living room. J. W——, aged eight years; scarlet fever, pneumonia; three slept in small cul-de-sac room, the air of which appeared stagnant and oppressive; pig kept within a few yards of the dwelling. R. B——, aged forty-three years, bookseller; heart disease, pneumonia; house with "container" watercloset apparatus, the soil-pipe being unventilated; the health of the deceased impaired by alcoholic excess. J. S——, aged two years; pneumonia; cottage has only one bedroom, which is destitute of fireplace or other means of permanent ventilation. H. H. Y——, aged one year; congestion of the lungs; house has "container" watercloset, with unventilated soil-fall-pipe. J. F. O——, aged one year and nine months; measles, pneumonia; old barn adjoins the house, in which a pig and fowls are kept; bedroom without fireplace or other suitable provision for permanent ventilation. M. M'O——, aged thirty-eight; labourer; pneumonia; three slept in a small bedroom which had no fireplace or other suitable provision for permanent ventilation. J. R——, aged one year and nine months; measles, pneumonia; six slept in a small bedroom without fireplace or other provision for continuous renewal of the air. W. E——, aged four; measles, pneumonia; slept with parents in cul-de-sac room, the chimney flue of which was stopped up. S. B——, aged fifty-three; broncho-pneumonia; house permeated with offensive odour from filthy stable, which immediately adjoins, and badly ventilated. J. T——, aged thirty-four; pneumonia; back-to-back house; cul-de-sac bedroom; chimney flue papered over. J. A. R——, aged nine months; congestion of lungs; no fireplace or permanent ventilation in bedroom. A. B——, aged thirty-nine; childbirth twelve days ago; broncho-pneumonia seven days; back-to-back house, built up against soil; cellar of same damp; bedrooms badly ventilated. M. J. L——, aged three years; pneumonia; back-to-back house; child slept between the parents, breathing the devitalised breath of both. E. J. H——, aged two years; morbilli, broncho-pneumonia; slept with parents in close corner of room. J. L——, aged sixty-one; broncho-pneumonia; slop-stone waste-pipe in direct contact with sewer; stench-trap at inlet out of repair. J. G. K——, aged two years and a half; pneumonia, phthisis; slept between parents; odour of small bedroom, the door of which was closed when occupied and chimney flue stopped up, offensive. E. T——, aged four years; pneumonia; bedroom insufficiently ventilated, forming cul-de-sac. H. J——, aged nine years; pneumonia and meningitis; house damp from soil at back and gable, and otherwise insanitary; an old pigstye adjoins, now used as a duck-coop. S. A. J——, aged twenty-two months; pneumonia, convulsions; no fireplace in bedroom A. G——, aged fifty-nine years; pleuro-bronchitis; drain courses under property. R. A. D——, aged one year; broncho-pneumonia; watercloset, with unventilated sewer section, immediately adjacent to dwelling; unventilated drain passes up enclosed passage, contiguous. J. H——, aged three years; measles, broncho-pneumonia; watercloset, with unventilated sewer section, within the premises; drain at back, defective flush and obstructed. T. B. J——, aged eleven months; bronchitis; slept with parents in badly ventilated room, the chimney flue of which was stopped up. J. N——, aged one year; bronchitis; bedroom badly ventilated, chimney flue of same stopped up. F. L——, aged eight months; bronchitis; bedroom badly ventilated, forming cul-de-sac. T. B——, aged two months; capillary bronchitis; cottage adjoins house, at the further end of which is a stable; bed placed in close corner of room, the chimney flue of which is papered over. L. H——, aged eleven months; bronchitis; seven occupy one room; deceased slept with parents in bed placed in close corner. S. M. K——, aged eleven months; bronchitis; bedroom forms cul-de-sac, badly ventilated. J. S——, aged three months; bronchitis; house new, damp soil. M. A. R——, aged forty-seven years; bronchitis; watercloset, with "container" apparatus and D-trap, and unventilated soil-pipe, in centre of house; slopstone waste-pipe communicates direct with sewer; offensive odour at time of visit, the bell-trap being out of place on slopstone. J. M. C——, aged two years; bronchitis; slept with parents in cul-de-sac bedroom. A. G——, aged thirteen months; congestion of lungs, convulsions; bedroom close, chimney flue stopped up. J. B——, aged fifty-nine; pneumonia; watercloset, with unventilated sewer section, immediately adjacent to dwelling; bedrooms badly ventilated. E. S——, aged forty-six; bronchitis; bedroom, which has no fireplace, immediately over undrained stable and byre. B. J——, aged one year; bronchitis; drain courses up enclosed passage; watercloset, with unventilated sewer section, directly attached to dwelling. M. McM——, aged eight months; back-to-back house. L. B——, aged eighteen months; bronchitis; watercloset, with unventilated sewer section, adjoins back kitchen. H. J. F——, aged six months; bronchitis; overcrowding; five slept in one small room, the chimney flue of which was stopped up.

From this crude and yet momentous summary, which might have been indefinitely increased by bringing the experience of other years before the reader, will, I think, be apparent the immense importance of securing for all an in-door atmosphere uncontaminated with animal filth emanations; and, in fact, that there is greater danger in a deficiency of ventilation than in a moderate excess. It would be easy to show the relation of such a polluted atmosphere to the etiology of other acute diseases, such as peritonitis, &c., as I have endeavoured to trace with respect to inflammation of the brain (see THE LANCET of Jan. 19th, 1884); whilst more chronic so-called scrofulous and other diseases of denser structures might be shown to appear to have a more than fancied association with such causes. But there are always risks connected with hasty generalisations which the cautious would not expose themselves to the odium of, and which I should have felt backward to undertake were it not that all experience, technical and common-sense, alike points to the dangers which it has thus been my purpose to bring into more prominent relief.

Fully conscious of the frequency with which deposit of an offensive nature is apt to occur in the house sections of sewers, and of the evils which appear to be directly traceable to the placing of waterclosets, with their usually unventilated sewer connexions, in immediate contact with the dwelling-house—thereby favouring the direct determination towards the warmer air within, especially in cold weather, when the surface of the ground is sealed with frost—I have, when in office, urged my boards to enforce the placing of these structures when on the ground floor, and consequently presenting difficulties connected with the efficient ventilation of the sewer section in communication therewith, as in cottage houses, in a position *detached from the dwelling*, or from any outer structure immediately attached thereto.

BEQUESTS.—By the will of the late Mr. Edwin Cox £500 is bequeathed to each of the following institutions: the Royal Free Hospital, Earlswood Idiot Asylum, the Deaf and Dumb Asylum, Old Kent-road, the City of London Truss Society, the National Benovolent Institution, the Hospital for Consumption and Diseases of the Chest at Brompton, the Cancer Hospital, Middlesex Hospital, Westminster Hospital, Charing-cross Hospital, and St. Mary's Hospital.

A NEW PLAN OF OPERATING UPON MENINGOCELE.

By NOBLE SMITH, F.R.C.S. EDIN.,
SURGEON TO THE ALL SAINTS CHILDREN'S HOSPITAL, AND SURGEON TO THE ORTHOPÆDIC DEPARTMENT OF THE FARRINGDON DISPENSARY.

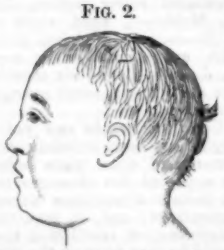
CONGENITAL hernia of the membranes of the brain has hitherto been a very unsatisfactory deformity to deal with. Almost every child so affected has died early, whether subjected to operative treatment or not. Injection of iodine into the sac has been the least unsuccessful operation tried, and Dr. Morton's iodo-glycerine fluid is doubtless the best form in which it can be used. The risk, however—one may almost say the certainty,—of any fluid thus used passing into the cavity of the skull is a serious objection to this means of treatment; and were it not for the fatal nature of the affection when left to itself, surgeons would probably seldom venture to operate upon the subjects of it at all. I have devised a plan by which the risk of the injected fluid passing beyond the sac is reduced to a minimum, and I will now describe the only case upon which I have yet operated in this manner.

C. H.——, aged fourteen days, was sent to me by Dr. Fancourt Barnes from the British Lying-in Hospital in January of the present year. Fig. 1 shows the size of the tumour. The sac was formed of healthy skin, and could be emptied by pressing its fluid contents into the cavity of the

FIG. 1.

Before operation. The fluid contents of the sac could be pressed into the cavity of the skull. (Exhibited at a meeting of the Medical Society, Feb. 11th, 1884).

FIG. 2.



Five months after first operation (July, 1884). The remains of the tumour being hard cicatricial substance completely closing the opening into the skull.

skull, a proceeding which caused the infant to cry. I exhibited the child at a meeting of the Medical Society on February 11th. With regard to the treatment, I tried in the first place the effect of pressure. I made a cast of the tumour, upon which was moulded a piece of gutta-percha. From February 1st the pressure was gradually increased until March 31st, when, finding no improvement had taken place, I resorted to the following operation. The sac was emptied by pressure and its two sides held together between my finger and thumb. My intention was not to inject into the cavity of the sac, from which the fluid would have free access into the ventricles of the brain, but if possible to inject into the wall of the sac close to the lining membrane. I used a hypodermic injection syringe and pierced the sac as it was held between my finger and thumb, directing the point *just to one side of the median line*. The latter line would, of course, represent the cavity of the sac which for the time being was obliterated. I must have penetrated very near to this cavity, but did not pierce it, for upon injecting the fluid there was considerable resistance to its entry, although I had ceased to hold the sac and the latter had refilled. If the needle had penetrated the sac, the resistance would have been certainly slight, and the after-effects might have been severe. I could only inject a few minims of iodo-glycerine (about eight); the child cried, and continued to evince symptoms of discomfort for the next two hours, when he fell asleep, and subsequently awoke seeming to be quite comfortable, and remaining so. Upon April 15th I injected the tumour again in the same way. On April 23rd the child's general health was good, the tumour felt firm, as if it was consolidating; I therefore ventured to pierce it to the centre with the needle and injected more iodo-glycerine. Upon May 1st I found that no bad symptoms had followed the last operation, the tumour was feeling firmer. I repeated the injection on May 14th, and again on June 15th; upon the last occasion I left at least twenty minims in the centre of the tumour, which was a larger quantity than I had hitherto used. On July 14th the child was quite well, the tumour was contracted to a flattened corrugated mass of skin, as shown in Fig. 2, and the case cured.

By injecting into the walls of the sac we not only prevent the iodine from entering the cavity of the skull, but we also attack more directly the part which we wish to influence—namely, the sac, which we wish to contract.

Queen Anne-street, W.

BICYCLE RIDING AND PERINEAL PRESSURE, THEIR EFFECT ON THE YOUNG.

By S. A. K. STRAHAN, M.D.,
ASSISTANT MEDICAL SUPERINTENDENT, COUNTY ASYLUM, NORTHAMPTON.

CYCLING is doubtless a very healthy and pleasant mode of exercise when used in moderation, but now that tens of thousands of our boys ride bicycles daily, and "get up records" of thousands of miles in the year, it may not be out of place to point out some alarming evils which are likely to arise from this abuse of an otherwise healthy pastime. Some time ago it was pointed out that obscure nervous complaints would probably be developed by the continual jarring—the succession of shocks conveyed to the spinal column in bicycle riding; and this, I believe, has proved correct in many instances, notwithstanding "Arab springs," and "rubber cushioned" machines. But it is to something much more serious than this that I would now call attention: it is to the amount of pressure brought to bear upon the perineum in growing boys, affecting directly the prostate, the muscles of the bulb, &c., and indirectly the whole generative system.

The bicycle saddle is now reduced to the smallest possible limit. It is just wide enough at its posterior part to cover the ischial tuberosities, and it tapers off quickly to a long, narrow horn in front, upon which the perineum rests. Let us consider the position of the body and limbs when the rider is mounted, and we can then appreciate the amount of body weight which must be thrown upon the perineum. In bicycle riding the legs are, when extended, vertical, and the pelvis is flexed upon the thighs or rolled forward. This rolling forward of the pelvis is slight in easy riding, and very marked in fast riding and hill climbing. Now, when the body and pelvis are bent forward, the ischial tuberosities are raised from the saddle, and the whole weight of the body, save what is transmitted to the pedal by the then extending leg, is thrown upon the perineum. It is not much of the body's weight that is conveyed to the pedals. In easy riding on the level the weight of the limb from the hip down is sufficient to move the machine, and in hard riding the extra pressure is gained not so much by throwing the body's weight upon the pedals as by pulling upward on the handle-bar, and so further increasing the pressure of the body upon the saddle. But even admitting that the pressure upon the perineum be only a few pounds, I hold that it must be injurious in the extreme, for were the pressure *nil* when riding upon a perfectly plane surface, it must at times be considerable when the machine is ridden over an unequal surface such as is afforded by our best country roads. Let those who talk of "the beautiful gliding motion of the bicycle" try to play a game of billiards after a ride of twenty miles, and then explain where all their "shakiness" comes from if their motion has been that of the skater. Now, this pressure on the perineum, whether it be continuous and increased at every jolt, or whether it be made up of jolts alone and be *nil* in the almost imperceptible and irregular intervals must be injurious, more especially to growing boys. It must cause irritation and congestion of the prostate and surrounding parts, tend to exhaust and atrophy the delicate muscles of the perineum, and also call attention to the organs of generation, and so lead to a great increase in masturbation in the timid, to early sexual indulgence in the more venturous, and ultimately to early impotence in both.

We all know that among the Tartars horse-riding causes complete impotence in many of their strongest and most daring men, with wasting of the testes, dropping of the beard,

and change in the pitch of the voice; and we also know that the introduction of the horse into the western world had quite as much or more to do with the extermination of the red man than had the almost simultaneous introduction of the European. In a southern tribe of Indians—that is, a horse-riding tribe—it is a marvel to find a squaw with more than two or three children, though they—both men and women—marry young. Impotence is said to be common amongst them at thirty. The "disease of the Scythians" and its causes are sufficiently notorious.

If, then, these sad results are the outcome of immoderate equitation where there are an extensive seat and a stable foot rest, and where the adductor muscles of the thighs are used, what are we to look for, where our boys of ten and upwards spend the greater part of their own time riding bicycles, and get over thousands of miles in the year, perched upon a saddle no bigger than the hand which conveys every jolt of the machine to the body; where the jolts are ten times more numerous than those experienced by the equestrian and, occurring without any approach to rhythm, are conveyed unexpectedly to the person?

Some time ago Dr. B. W. Richardson when advocating cycling as a healthy exercise said, if I remember rightly, "that what made cycling so healthful an exercise was that in it you enjoyed all the muscular motion experienced in walking with this advantage, that the bodily weight was taken off the feet and legs." This, of course, would be an advantage if the bodily weight were better bestowed than it naturally is upon the feet; but as it is on the bicycle the transference of weight from the feet to the perineum cannot but be for the worse.

It must be understood that what is said in this article applies particularly to growing boys, who generally straddle the largest machine their length of leg permits, and so greatly increase the liability to perineal pressure. What cycling—for the saddle with the long, up-turned horn, is now almost universally used for the tricycle too—will do towards the advance of those prostatic affections which so often render the closing years of life miserable, time alone will tell.

Berry Wood, near Northampton.

TREATMENT OF

THE HABIT OF INJECTING MORPHIA BY SUDDENLY DISCONTINUING THE DRUG.

BY J. ST. THOMAS CLARKE, M.B. LOND., F.R.C.S. ENG.

THE following case is one of several similarly treated at Mrs. Theobald's Institution, Leicester.

A lady, aged twenty-nine, the wife of a medical man, was admitted to the above institution on March 25th, 1884. She was in the habit of injecting herself with morphia subcutaneously three or four times a day, always in the arms, and injecting three or four syringefuls at a time, each syringeful containing about twenty minims of a solution of acetate of morphia of the reported strength of twenty-five grains to the so-called ounce bottle of water. The bottle I found held nearly nine drachms and a half of fluid. The solution so made contained, therefore, quite two grains and a half in the drachm, which made up her usual dose, though at times this was exceeded; and probably in the day she would thus absorb from eight to ten grains of morphia—perhaps more. The first dose was usually in the morning, before or after breakfast, the second one later on in the morning or afternoon, and the last about 11 at night. The habit was of nine years' duration, and had not been associated, as is frequently the case, with a fondness for intoxicating drinks. The drug was first used hypodermically for gastrodynia and sickness during pregnancy, the quantity being increased gradually the last few years. The patient was a tall stout woman, five feet eight inches in height, weighing about thirteen stones, with a somewhat leaden complexion. The pupils were rather contracted but not unduly so. Her appetite was fairly good. She had had two children, the last in 1878. The catamenia were regular. She had had diarrhœa at times. Her arms were bulbous and pitted, with red indolent swellings here and there from irritation or suppuration following the injections, and altogether they presented an unseemly sight from shoulder to wrist, with blue and white indented scars, the results of former abscesses. She expressed herself anxious to get rid of her slavery, and voluntarily handed me her apparatus and solution on March 25th. She kept up bravely till the evening, when she began to feel the want of the morphia, and passed a restless night with gradual development of intense gastric pain. The treatment followed during the progress of the case included resting the stomach, the administration of bicarbonate of soda and bromide of potassium, effervescing medicines with prussic acid, chloroform, and opium liniment to the pit of the stomach, then bismuth, bicarbonate of soda, prussic acid with barley-water, arrowroot, gruel, &c., and skilled nursing. Ice was not given, as it was objected to. Her condition the second day was one of great restlessness, tossing about the bed, incessant vomiting of green bile, great gastric pain, no sleep, bowels free, with an evening temperature of 100·5°. On the 27th (the third day of treatment) the general symptoms and temperature were the same, though scarcely so marked, but the pupils were dilating. On the 28th they were much the same, with a temperature of 101°. The vomiting of green bile was still very obstinate, but the patient stated that she had had about three hours' sleep during the preceding night. She also looked better, and had become cheerful and much less restless. On the 29th she stated that she was sick only once during the preceding night, and was then having simply barley-water in small doses. On the 30th she was progressing favourably; the sickness had ceased, and the patient experienced a feeling of hunger. Chicken broth, milk and barley-water, and tapioca pudding were ordered. On the 31st she was still progressing; the slop diet had agreed with the patient; sleep was obtained, but only half an hour at a time. On April 1st the temperature was 100°, but she was doing remarkably well, and sat up for a while. On the 2nd the patient was sick once, but she sat up longer. On the 3rd she was allowed to go downstairs to dinner. On the 5th she was gaining strength rapidly. The further progress of the case was onwards to complete convalescence and restoration to health.

At the end of June her husband stated that the improvement had been progressive. He says she sleeps all night, has lost the fits of sneezing and slight diarrhœa with which she was troubled after leaving, and the dysmenorrhœa from which she suffered prior to the morphia habit is now much less than before. She is less stout, has never asked for or suggested a return to morphia, and has no special desire for any stimulants. Though advised by us to become a teetotaller, she takes about a pint of ale and half a pint of ginger beer a day, with no bad tendencies so far. She never asks for wines or spirits, and has no mental worry or depression. Her temperament is quite light-hearted, and she is about to make a long sea voyage.

Remarks.—The above case presents some peculiarities, among which the absence of any alcoholic craving and the restriction of the case to chronic morphia poisoning are to be noted. This quality, as observed by her husband, is probably the fact to which may be attributed the rapid and unique completeness of her cure, and is a point of considerable importance. Another point is the success of the abrupt discontinuance of the drug as a method of treatment. Dr. Benjamin Ward Richardson, in the *Asclepiad* of January, 1884, has a very able paper on "Morphia Habitués and their Treatment," and after weighing the evidence in support of three different modes of treatment—viz., (1) the substitution of some other drug, such as chloral, or some alcoholic drink; (2) the abrupt method; and (3) the tapering off plan—insists on the last method, carried out in a systematic form and gradual manner, as being the right and most trustworthy one. From experience of the tapering off plan in several severe cases I am forced to confess my disappointment in it, and a disbelief of its value. I contend that the method of sudden and absolute withdrawal has greater advantages in the end for patient, doctor, and nurse. It is only of late that this plan has become more recognised in the profession in the treatment of delirium tremens and dipsomania; but it is a fact that this plan has been carried out at Mrs. Theobald's Institution for many years with most signal success, and so far I have seen no bad results. In the morphia cases the patient is infinitely more manageable on the sudden withdrawal plan than on the others. I may note that in this case the catamenia had never been checked by the morphia; though I had a case some time ago where they were in abeyance for five years under morphia injections, and the habit being suddenly broken they became re-established, and pregnancy followed.

Leicester.

ETHER AS AN ANÆSTHETIC IN CASES WHERE THERE IS OBSTRUCTIVE DISEASE OF THE LEFT SIDE OF THE HEART.

BY ARTHUR JEFFERSON, M.R.C.S.,
HOUSE-SURGEON, YORK COUNTY HOSPITAL.

UNTIL the following case came under my observation I never thought it necessary to examine the heart before administering ether. In all cases, provided the patient was neither a young child nor an old person, I was in the habit of giving ether without making any further examination than glancing at the chest walls, to see that they were not too rigid, and asking the question, "Have you a cough?" Both these points being settled in the negative, the anæsthetic was given without further delay. Having given the anæsthetic in several cases of regurgitant valvular affection, and having noticed its great stimulating effect in this form of cardiac derangement—so great that in three cases the murmur has been found to disappear under the ether, reappearing gradually as the effects of the drug wore off,—and also in the almost pulseless heart of collapse; the conclusion was somewhat hastily arrived at that the state of the heart did not matter in ether giving. However, last year a male patient, aged fifty-two, was admitted to the hospital under the care of Mr. Jalland, who decided to perform an operation upon him. Accordingly, the man not being emphysematous and not having a cough, the administration of ether was commenced. The patient took the anæsthetic badly, and there was a good deal of struggling, some minutes elapsing before conjunctival insensibility was arrived at. Just at this stage the patient's breathing began to excite attention; it became somewhat hurried and very shallow. The pulse, however, continued regular and strong; in a very few seconds the face commenced to turn blue, and the respiration became so shallow as to be purely laryngeal, no movement of the abdomen or chest-wall being perceptible. The ether was at once discontinued, and artificial respiration commenced. After a few minutes the blueness of the face had disappeared, and the respiration had become fairly normal. As it was important that the operation should be at once performed, the patient was allowed to partially come round, and then, his heart having been stethoscoped and found to be apparently healthy, chloroform was administered. Up to this time, even when he appeared to be on the verge of death from the first anæsthetic, his pulse had remained good, but now, after a couple of minutes of chloroform inhalation, it rapidly failed, becoming irregular. By means of the cold water towel and brandy the patient was brought round and the operation postponed. In the evening of the same day the man's heart was again examined, this time more carefully; there was now found a slight thrill at the apex and a somewhat presystolic murmur in the same situation, which murmur could only be heard over about half a square inch of chest surface. These symptoms evidently indicated mitral stenosis. A week after the patient was again brought into the operating room and kept under the influence of unmixed chloroform for about forty-five minutes, without at any time showing any alarming symptom.

Remarks.—In this case what would appear to have happened is somewhat as follows. The heart, under the influence of the ether, commenced as usual to contract more vigorously, the consequence of this being that while its right side was urging on an increased quantity of blood into the lungs, this same surplus was prevented from escaping thence by reason of the contracted mitral orifice. Hence the lungs became more and more congested; this congestion, added to the peculiar respiratory effects of the ether itself, caused the patient to assume, little by little, the appearance of one about to die of asphyxia. No lung complication being suspected at that time, it was inferred that the patient's condition was caused by some susceptibility of his respiratory centre; it was not thought that chloroform could have any direct influence on this, and therefore the heart being seemingly healthy, this anæsthetic was given. It can easily be imagined that this drug, acting on a diseased heart struggling with still congested lungs, would cause the irregularity of the pulse which ensued. Finally, it was demonstrated in the following week that chloroform could be given, in the absence of the congestion of the lungs, with perfect safety. This case would seem to show that the heart should always be examined before ether is given; and that the giving of this anæsthetic is, at any rate, a very questionable practice in cases where there is obstructive valvular disease on the left side.

York.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WEST LONDON HOSPITAL.

ACUTE TRAUMATIC (?) TETANUS; DEATH ON SEVENTH DAY OF ILLNESS; AUTOPSY; REMARKS.

FOR the following notes we are indebted to Mr. J. P. Glover, house-physician.

J. M——, aged twenty-six, was admitted on August 4th, 1884. He was in his usual health until about four days previously, when he began to suffer from pain in the lower part of the back and between the shoulders. On the following day the pains became worse, especially on movement, and they radiated from the spine round the lower part of the chest and the upper part of the abdomen. Stiffness of the lower jaw followed, and spasmodic contractions of the extensor muscles of the thighs.

On admission his face was pallid and wore an expression of suffering, the skin was hot and perspiring freely. The lower jaw was firmly closed and almost immovable; the speech, except for this, was not affected, and fluids were taken and swallowed without difficulty or resulting spasm. The chest muscles were not much affected, and the diaphragm moved freely. The arms were unaffected, both as regards motion and sensation. The extensor muscles of the thigh, the muscles of the back, and, to a less extent, those of the abdomen, were affected with tonic spasms of momentary duration, and but slight severity, occurring once or twice in a minute. Risus sardonicus was observable during each spasm, but the spine was not noticeably arched. The patient complained of pain in the back and in the affected muscles, especially the thighs, which was worse during the spasms. Turning in bed or movement of the legs was painful, and produced the painful contractions mentioned above. The back was reddened and slightly blistered by the fomentations and turpentine stupes which had been applied before his admission, but there did not appear to be any especially tender spot elicited either by pressure or the hot sponge. There was no priapism, nor loss of sensation or motor power. Urination was normal; bowels confined. The patient was quite sensible, and remained so to the moment of death. The temperature was 101°; pulse 90, quickened with each spasm; heart sounds normal.

No history of wound or injury was given on admission, but he had a small healed-up scratch on the hypothenar eminence of one hand, which was said to have been done by a rusty nail about a fortnight previously. He said he had got wet through a week or so before admission, and thought he might have taken cold.

Aug. 5th.—The patient's condition was substantially unchanged; the spasms, if anything, were less severe. At no time was there any noticeable retraction of the head or approach to opisthotonos. The breathing was more shallow and chiefly diaphragmatic, the chest walls moving but slightly. There was little pain, except during the spasms, which continued to be several to the minute and lasting two or three seconds. At 7 P.M. he was suddenly attacked with a very severe convulsive spasm, engaging all the muscles of the body and arching the body to one side, stopping respiration and apparently the heart's action. For a minute or so he lay motionless and apparently moribund. Breathing, however, returned in short gasps, drawn through the clenched

teeth, and respiration became gradually quiet and natural. A second, but not quite so severe, attack occurred an hour later, after which he had a pretty quiet night and some sleep. He could still swallow fluids without difficulty.

6th.—The general symptoms became rather more pronounced during the day. The spasms rather more severe and painful; swallowing became difficult, and excited spasms when attempted. The evening temperature was 102·8°; the pulse 152 (feeble); respiration shallow and diaphragmatic (68). Voluntary power was distinctly impaired, and the patient said he felt weaker all over. Urination was very frequent, but voluntary.

7th.—The patient was in less pain, but evidently weaker. The spasms but slight; temperature 104·8°; skin pallid and perspiring profusely. About noon, without any general spasm, he suddenly turned livid, respiration and the heart's action stopped together, and he was dead in a few seconds. He was quite sensible to the last, and spoke just before the final seizure. The case thus lasted just a week from the onset of definite symptoms, and about a fortnight from the receipt of the scratch on the hand.

The treatment consisted of ice to the head and spine, with an initiatory purge of calomel and jalap, chloral hydrate, and hypodermic injections of morphia.

At the necropsy, made twenty-four hours after death, the brain and spinal cord were carefully examined, but nothing abnormal could be found in either by naked-eye inspection.

Remarks.—This case is considered an interesting one from its departure in many particulars from the ordinary courses of tetanus; indeed, for some time it appeared doubtful whether it might not be one of spinal meningitis. The occurrence throughout the attack of spasms of but little, and scarcely at all increasing, intensity, the two isolated severe convulsive seizures, the free action of the diaphragm, the late appearance of any difficulty of swallowing, and the very slight opisthotonos, combined to render the case an anything but typical one.

CUMBERLAND INFIRMARY, CARLISLE.

PYO-SALPINX; LEAKAGE INTO THE UTERINE CAVITY; ABDOMINAL SECTION; DRAINAGE; RECOVERY.

(Under the care of Dr. LEDIARD.)

ISABELLA C——, aged twenty-seven years, residing at Flimby, came in on April 30th, 1884. She stated she had been married for six years, having a healthy child aged three years. Before and after marriage her periods were irregular and attended with more or less uneasiness; but fifteen months ago she first noticed a thick, yellowish, acrid vaginal discharge, which was offensive and excoriating; at the same time a dull heavy pain was felt in the right iliac region and above the pubes, for which she was treated as an out-patient at the Newcastle Infirmary.

The patient was thin and sallow, and her spirits were much depressed. Careful palpation over the painful area revealed a swelling the size of a small orange about the brim of the pelvis on the right side; there was considerable tenderness on pressure and a sense of elasticity conveyed to the finger. Per vaginam the uterus was rather fixed and pushed over to the left side of the pelvis, whilst high up to the right of the uterus was an elastic swelling which was continuous with the swelling felt through the abdominal wall. The discharge, as it issued from the vulva, was ascertained to be purulent, and when the patient was examined with a speculum a thick tenacious fluid was seen issuing from the os. (The notes unfortunately do not state if it was pus-like.)

On May 24th, the intestines being carefully pressed away from the tumour, Hensley's exploring aspirator was used just above Poupart's ligament, and some thick offensive pus was drawn off.

On the following day the patient was subjected to median abdominal section, with a view to draining or removing the disease. Upon pushing the bowels aside the tumour was with some trouble exposed, lying deeply, and found to occupy the right side and upper portion of the pelvis; adhesions to uterus, intestine, and pelvic brim entirely negatived the idea of removal, accordingly the tumour was incised, and found to possess walls of great thickness, as had been conjectured at the time of aspiration. Some two ounces of stinking pus were sponged away as it oozed out; the incision was then enlarged, and the finger searched the soft interior of the abscess. The abdominal wall was then depressed and stitched firmly to the margins of the sac; a drainage-tube and some wood-wool completed the dressing.

Two days after operation the offensive discharge disappeared from the vagina; the temperature, normal for the first four days, rose on account of some pus shut up by the stitches, and fell when these were cut. The cavity of the tumour was kept constantly drained until obliteration was completed; and the patient left the infirmary in good health and capital spirits on July 16th, having had a painless "period" since operation.

Remarks by Dr. LEDIARD.—The interest of the case lies very much in the fact that we had to deal with a pyo-salpinx or collection of purulent fluid within the right Fallopian tube, which leaked from time to time into the uterus—a circumstance which has not hitherto been noted in connexion with this disease. Mr. Lawson Tait informs me that he has often expected to find a hydro- or pyo-salpinx communicating with the uterine cavity, but has never done so. I was much struck with the thickness of the walls of the tumour, which would be understated if put at half an inch; and it seems reasonable to suppose that the density of the walls prevented that increase of size in the tumour which might have occurred, thereby forcing open the uterine end of the Fallopian tube and establishing leakage rather than drainage. The question of draining the tumour from the uterine cavity we did not care to entertain, and were fortunate enough, by the recovery of the patient, to be unable to say how far such idea could have been realised. One other point which seems to confirm the diagnosis, and one which may be of diagnostic value in the future, is the statement of the patient that the yellow discharge was mixed with the menstrual fluid.

KASHMIR MISSION HOSPITAL.

DISEASE OF MASTOID CELLS; OPERATION BY INCISION AND GOUGING; RECOVERY; REMARKS.

(Under the care of Mr. ARTHUR NEVE.)

BULAND K——, a Pathan, was admitted for very extensive syphilitic ulceration of the palate. When about to be discharged after successful treatment, he complained of much pain in the ear. Examination showed the membrana tympani bulged forward by pus. A free incision was made in the tympanum, and pus escaped. A considerable quantity exuded daily, and for a time he had relief. The escape became, however, intermittent, and the pain very intense, affecting one side of the head. To pressure there was some tenderness over the mastoid process. After two or three weeks' treatment without material benefit an operation was resolved on.

Operation.—Under chloroform a crucial incision was made, freely exposing the bone, into which, by means of a narrow gouge, a hole was drilled. At a depth of half an inch pus was reached, and a cavity containing perhaps half a drachm exposed. This was syringed out, and powdered with iodoform.

Progress.—The progress was very satisfactory. There was complete relief of pain. The operation wound closed in the course of a few weeks, and shortly after the discharge from the ear ceased altogether. The patient was discharged cured, and when last seen, a year having elapsed since the operation, was in good health, and had suffered no relapse of the ear disease.

Remarks.—Many successful cases of this operation have been recorded. In this case the marked syphilitic taint, and the acute course of the symptoms, both indicated the necessity of active treatment, and afforded a healthy prognosis. If the symptoms had been far less marked, it is probable I should have resorted to operation. There is no reason why the principles of ordinary bone surgery should not be applied to the mastoid process; with proper care no harm can result. In the more dubious cases good will frequently result. The disease, if allowed to continue uncured, is of serious import, and an operation affording any reasonable hope, and with little attendant risk, might probably be resorted to with advantage far oftener than is at present the case. I examined the ear on July 18th, 1884. The patient's hearing was normally acute, and the tympanum appeared quite healthy.

Reviews and Notices of Books.

Report on the Scientific Results of the Voyage of H.M.S. "Challenger" during the years 1873 to 1876, under the command of Captains Nares and Thomson. Prepared under the superintendence of the late Sir C. WYVILLE THOMSON, Knt., F.R.S., and now of JOHN MURRAY, F.R.S.E., one of the Naturalists of the Expedition. Zoology, Vol. VII. Published by order of Her Majesty's Government. London: Longmans and Macmillan. Edinburgh: Adam Black and Douglas and Foulis. Dublin: A. Thom & Co. 1883.

THE contents of this volume are:—1. Report on the Anatomy of the Spheniscidæ collected by H.M.S. *Challenger*, by Morrison Watson, M.D. 2. Report on the Pelagic Hemiptera collected by H.M.S. *Challenger*, by F. Buchanan White, M.D. 3. Report on the Hydroida dredged by H.M.S. *Challenger*. First part, Plumularidæ, by G. J. Allmann, LL.D. 4. Report on the Specimens of the Genus Orbitolites collected by H.M.S. *Challenger*, by W. B. Carpenter, C.B., M.D.

The Report on the Spheniscidæ, or Penguins, by Dr. Watson, extends over 242 pages, and the letterpress is illustrated by no less than nineteen plates showing the anatomy of this remarkable group of birds. The plan Dr. Watson adopted has been to select a typical specimen—the Eudyptes chrysocome obtained from the island of Tristan d'Acunha,—and to make a thorough and complete dissection of it; the variations met with in dissecting other species are carefully noted and compared with the characters of the typical form. On the whole it proved that the variations were slight.

The penguins have received a considerable amount of attention at the hands of naturalists. Cuvier, Meckel, and Owen have each given good descriptions of their osteology; Reid, Coves and Gervais, and Alix have published monographs upon one or more species, but none of these compare in fulness to the present memoir. The vertebral column in the dorsal region is remarkable for the resemblance of the vertebræ to those of reptiles in being opisthocœlous—that is in the anterior surface of the bodies being globular and rounded, whilst the posterior are deeply concave, so that the convexity of each vertebra is received into the concavity of the vertebra next preceding. Dr. Watson finds this peculiarity confined in birds to the auks and penguins. He finds that there are ten vertebral ribs, the last being very slender and buried in the abdominal parietes, so that it is apt to be overlooked. The sternal ribs are eight in number. The scapula is of relatively larger size than in any other group of birds. He notices that the characteristic feature of the wing of the penguin as a whole is to be found in the great amount of compression exhibited by all the bones of which it is composed—a flattening that is probably due to the alteration of its functions, for in these birds the power of flight is lost, but the wing is converted into a paddle, which serves the purpose of propelling the bird through the water.

"In accordance with this alteration of function, the bones of the wing are so modified in form that that organ may be carried forwards, while its sharp anterior margin offers the minimum resistance to the surrounding fluid. In the backward or effective stroke, on the other hand, a broad surface is presented to the water, and instead of the wing being carried backwards, the bird is propelled forwards in accordance with the requirements of the animal. Moreover, the movements permissible between the separate segments of the limbs are much more limited than in other birds; so much so that movements of pure flexion and extension in the joints beyond the shoulder can scarcely be said to be possible. These articulations, however, admit of a very considerable amount of rotation, and consequently, instead of the limb being converted into an absolutely rigid paddle or oar, the rotation in question converts the wing into a screw-like blade, the curvatures of which are constantly varying in accordance with the amount of rotation, which the forms of the different joints permit."

On observing the movements of the wing of an Aptenodytes which recently formed part of the collection of the Zoological Society, he found that the—

"wing of the penguin is never used in the manner of a rigid oar, which would imply the *simultaneous* movement of both wings in the same direction, in order to propel the bird. On the contrary, the wings are often and, indeed, usually, brought into use *alternately*, much in the same manner as the pectoral fins of a fish, and in every movement of the wing screw-like curvatures, which are due to the rotation of the different segments of the limb upon one another, are strongly developed. In fact, a constant screwing and unscrewing of the separate alar segments upon one another take place simultaneously with the forward or backward movement of the organ as a whole."

We purpose to notice the other sections in a future number.

Principes Techniques d'Assainissement des Villes et Habitations. By A. WAZAN, Civil Engineer. Paris: Baudry and Co.

AT this moment, when the prevalence of cholera renders the necessity of sanitary improvement most urgent, our neighbours are to be congratulated on the publication of a work on the technical principles of sanitation by M. A. Wazan. This eminent engineer is one of the few persons in France who has thoroughly studied the question of domestic and public drainage. It is singular how ignorant French engineers, architects, and medical men are of the practical details of drainage. They seem to have assisted at none of the long discussions held for so many years in England on the difficulties of resisting the ingress of sewer-gas into dwellings. The great majority do not even recognise the necessity of trapping a soil-pipe. M. Wazan opens the subject by dealing with the water-supply, taking as his model town Marseilles, which has a cubic metre of water per head per day, while Paris receives only 168 litres, and this to a great extent is wasted in the streets. By engineering works of no very difficult description the water-supply of Paris could be raised to a metre per day, and M. Wazan warmly advocates this increase. With regard to water-distribution, the author is in favour of constant supply, points out all the dangers of cisterns, and urges their employment solely for flushing drains and disconnecting the water-supply from the closets.

On the all-important question of house-drainage M. Wazan has thoroughly adopted English ideas. He believes in water drainage, and, quoting Dr. Carmichael's experiments, argues that the syphon-trap is an efficient protection against the introduction of germs, which he maintains are retained in the water. We have then set before us illustrations of all the well-known traps and syphons in use in England; but in every instance the author advocates the necessity of soil-pipe ventilation. The mere outlet on the roof of the house is not sufficient, and he maintains that there should always be an inlet below, and a ventilator on the soil-pipe side of every closet syphon. Imbued by such principles, it naturally follows that all French sanitary work is condemned. Those few houses in Paris where the drainage is direct to the sewer, and an attempt is made to imitate the English system, are loudly denounced for their sanitary imperfections. Under these circumstances, and considering that everything that has been done in France has been performed badly, it is somewhat surprising to find M. Wazan quite hopeful as to the practicability of carrying out in Paris our most advanced theories on water drainage. Certainly his work will contribute greatly to this result, but one book will not suffice to educate an entire people. In England we are far behind M. Wazan's ideal. His book, it is true, is a most complimentary epitome of the best work done in this country;

but the best work is the exception to the rule, and it is doubtful whether the French can be made to at once appreciate what is scarce, even in England. If they follow English example, it will be, we fear, much in the sense already denounced by M. Wazan himself. Our blunders will be repeated, and it will take a long experience before anything like perfection is attained. Nevertheless, if this pessimist view should unfortunately prove correct, it will not be M. Wazan's fault.

A Practical Treatise on Materia Medica and Therapeutics. By ROBERTS BARTHOLOW, M.A., M.D., LL.D., Professor of Materia Medica and General Therapeutics in the Jefferson Medical College of Philadelphia, &c. Fifth Edition, revised and enlarged. New York: D. Appleton and Co.

THE revision of the United States Pharmacopœia has necessitated the publication of a new edition of this work; in it we therefore find numerous alterations and additions in that part of the volume devoted to materia medica, but the author has at the same time spared no pains to bring it up to date in all respects. Besides other new matter, we note the addition of an article on the Convallaria Majalis. Dr. Bartholow states that "the signal advantage which it offers over digitalis" in heart disease "is the absence of danger from its administration and the freedom of the cerebro-spinal axis and the digestive organs from disturbance." He points out, however, that the reports on its use "are not uniformly favourable." The article on Electricity has been much extended and improved, a section having been added on Magneto-therapy, and that on Galvanism rewritten. In this edition, too, are plates which have not appeared in previous ones. In the article on Lead we read, "Paralysis of the common extensors of the fingers and supinators, while the power of the flexors and pronators is much less diminished, constitutes the very striking phenomena of lead poisoning or wrist-drop." This is scarcely correct, the supinator longus as a rule escapes the paralysis. We are surprised to find in the section on Phosphorus no reference to its use in leucocythæmia and Hodgkin's disease; cases in which it appears to have been of undoubted benefit have been recorded by Wilson Fox, Broadbent, and others. Possibly this is an accidental omission only, as we find a reference to leucocythæmia in the index under the head Phosphorus, though there is none in the text. Some words in this volume—e.g., "fiber" for fibre, "hypodermatic" for hypodermic, appear strange to the English eye. The large circulation and the rapid succession of new editions of Dr. Bartholow's work prove its appreciation by the profession; and the admirably complete and systematic arrangement of the contents, together with the scientific way in which the subject is treated, amply justify its reputation and reception.

OUR LIBRARY TABLE.

Lehrbuch der Physiologie. Dr. A. GRUENHAGEN. Leipzig: Leopold Voss.—We have received the first two parts of this text-book, which is the seventh edition of Wagner's well-known work, two or three editions of which were published by Otto Funke; and which has now been thoroughly worked up to the present date by the learned professor of physiology at Königsberg. The treatise has always held a high place amongst works on physiology from the clearness with which it is written, the absence of unnecessary details, and the full references it gives to the principal and most trustworthy sources of information. It is by no means a mere compilation of facts strung together to aid a student in passing his examination, but a thoughtful exposition of the principles on which modern physiology rests. The two parts now issued deal with the blood and circulation and with digestion, and the whole work will appear, it is stated, in three volumes. The only previous edition we have to hand with which to compare the present is the fourth, published in 1863. We notice that the type is larger, and that whilst some judicious pruning has been practised, much new matter has been introduced. Thus, under the head of the Microscopical Relations of the Blood, the section has been much enlarged by an account of the instruments devised by Malassez, Hayem, Gowers, Abbe and Thoma, and Zeiss, and the results obtained by their use; the red and white corpuscles are more fully described, and the action of reagents upon them is better given. The theory of the coagulation of the blood, with the experiments of Schmidt and Hammarsten is discussed at considerable length, and a full description is given of the gases of the blood, yet the whole section is only augmented by a page or two. The entire work seems to have undergone careful revision, and it may be recommended as one of the best treatises on physiology extant.

German-English Medical Dictionary. By JOSEPH R. WALLER, M.D. Vienna: Toeplitz and Deuticke. 1884.—Dr. Waller states in the preface that his dictionary is founded on Cutter's Dictionary, with the addition of many descriptive terms and the omission of obsolete and unused words. It contains about nine or ten thousand words; the rendering of the English equivalents are concise, correct, and appropriate. For example, *Brand* is given as scald, scalding, burn; gangrene, mortification; caries, necrosis; *Brand in den Zähnen*, caries; *neissen Brand*, gangrene; *feuchter Brand*, humid gangrene; *trockener Brand*, mummification; *erweichter Brand*, colliquation. This is very well done. There are, however, some terms that we miss. Why are *Wagrecht* and *Schwerpunnkt* omitted?

Students' Manual of Electro-Therapeutics. By R. W. AMIDON, M.D. London: G. P. Putnam's Sons, Henrietta-street, Covent-garden.—This little book, the author says, is presented to the medical public chiefly as a protest against the mysticism and charlatanry which have ever hung around the literature and practice of electro-therapeutics. The aim of the writer has been to present that amount of knowledge of electro-physics necessary to the comprehension of the construction and use of medical batteries, to point out the chief physiological effects of electricity, to sketch the methods of electro-diagnosis, and to show the general lines of treatment. In all these respects the author has faithfully kept his word. We can strongly recommend the book to students as a good introduction to a study of the subject.

Zeitschrift für Biologie. By KÜHNE and VOIT. Band 20, Heft 3. 1884.—This part contains the following articles:—1. On the Influence of the Extractions of Meat on the Development of Animal Heat, by Dr. Max Rubner. 2. Researches on the Relation of various Amides in the Animal Organism, by Dr. H. Weiske and B. Schulze. 3. On the Quantitative Estimation of Urea by means of Bromin Solution, by H. J. Hamburger. 4. The Chemical Composition of Cartilage, by Dr. W. Krukenberg. 5. On the Normal Fæces of Carnivorous Animals, by Dr. Friedrich Müller. 6. Estimation of the amount of Nitrogen found in the Fæces which does not proceed from the Food, by Hermann Rieder. 7. The Food of Labourers in Siebenbürgen.

Public Health Tracts.—Dr. Cornelius Fox, formerly medical officer of health for a combined district in Essex, has reissued in a stout pamphlet twelve of the health tracts which he prepared during his term of official work. They relate to many important points on which the views of a skilled officer of health are especially valuable; such as the question whether enteric fever is ever spontaneously generated, the supply of rainwater to cottages in rural districts, and the principles on which legislation respecting the pollution of rivers should be based. The work is pub-

lished and illustrated by Messrs. Churchill, and it will prove useful to students and others who take an interest in public health work.

New Inventions.

POCKET URINE TEST-CASE.

MR. ERNST JAHNCKE, Canonbury Works, Dorset-street, London, N., has at the suggestion of several medical practitioners introduced a useful and convenient pocket urine-testing case to the notice of the profession. It consists of a nickel-plated box of very simple construction measuring four inches in length by three in breadth, and three-quarters of an inch in depth, lined with velvet and divided into suitable compartments. The length of the box at one side is occupied by two test-tubes one within the other. When not in use a small urinometer in a satin sheath rests inside the smaller. The outer and larger is flat-bottomed and is intended to hold the urine when the specific gravity is taken. The remaining area of the case is divided transversely by a hollow partition which is ingeniously contrived to hold two books of red and blue litmus paper, while at the same time it keeps in position the other articles in the case. These are three small glass-stoppered bottles and a spirit-lamp, arranged as shown in the figure. The bottles are intended

to contain the appropriate tests for chlorides, sugar, and albumen. For the last named picric acid or other solid test is preferable from its emitting no fumes. Two other plain tube-bottles designed for Dr. Pavy's test-pellets for sugar and albumen accompany the case. They are tastefully fitted with capped corks, and their size admits of their being used to replace two of the bottles contained in the case, or *vice versâ*, at the wish of the purchaser. The fact that this is eminently a pocket case, small, neat, and sufficient, with its ease of adaptation to different methods in testing, renders it a most useful article. Not the least of its recommendations is its very moderate price.

SEIZURE OF UNSOUND MEAT.—The whole of the cargo of frozen beef on s.s. *Duke of Westminster*, amounting to about 150 tons, has been seized and destroyed by the order of the Medical Officer of Health for the Port of London. The reason for its seizure was that the meat was unfit for food on account of its being in a state of incipient decomposition.

THE THIRTY-EIGHTH REPORT OF THE COMMISSIONERS IN LUNACY.

PUBLIC attention has been so strongly directed of late to the consideration of the Lunacy Laws, and professional interest in mental diseases is so rapidly developing, that this report should obtain more consideration than falls to the lot of most Blue Books. Throughout the report no allusion can be found to any case of wrongful admission or detention in private asylums, a fact which will probably surprise those who have studied the popular lunacy literature of recent years, and will be held to be satisfactory or the reverse according to the views entertained on these subjects. To the profession it will be of interest to learn that the total of persons recognised by the Commissioners as of unsound mind was 78,528 at the end of 1883, being an excess of 1763 during the year. Satisfaction must be felt that this is not really increase, but accumulation; the ratio of first admissions into asylums during the year having been 5·15 per 10,000, when allowance has been made for the transfer of a large number of chronic imbeciles from workhouses to asylums. It is still more satisfactory to observe from Table III. that this ratio of admissions (5·15 per 10,000) is about the average for the last five years, and is decidedly less than the ratio attained during the first years of the action of the Government grant to lunatics in 1874. Private lunatics have increased in number from 7023 in 1873 to 8058 in 1883, the ratio to population having slightly diminished. The recovery rate for the year has been 38·5 per cent. on the admissions, being below the average (39·53) of the last ten years. The most valuable table in the report is that (No. XIV.) which shows the professions or occupations of the patients admitted into asylums during the year. These are grouped in accordance with the census reports of 1871 and 1881. The professional and commercial groups yield by far the largest proportions, varying from 5 per 1000 in soldiers to 3·4 in civil engineers, and 2·4 in artists to 1·0 in the teaching and lecturing class. In the commercial group travellers stand high (1·3 per thousand). In the agricultural, farriers and veterinary surgeons head the list (1·3), while shepherds and gamekeepers are lowest (·5). Of manufacturers, paper-makers are lowest (·3), while of handicrafts, plumbers, painters, and glaziers are highest (1·0). The group of persons employed in the heavier kinds of manual labour yields a lower proportion than any other (·48), miners being the lowest of its constituent classes (·3). All these proportions require correction by the ages of the persons included in the various classes and groups, and by other considerations. General paralysis was present in 13·1 per cent. of the male admissions, and in 3·2 of the females, the corresponding figures for epilepsy being 11·1 and 7·8; the latter disease existed to a much greater extent among the paupers than in the private patients, the proportions being 10·4 to 3·9. The suicides were eighteen in number, including four who were absent from asylums on trial. It would be desirable that some record should be made of suicides by insane persons not under certificates. If such cases were reported by the coroners to the Commissioners, the latter, it may be predicted, would, by investigation, obtain some valuable information in regard to the action of the present law of certification in preventing insane persons being placed under proper care. The long list of additions to existing asylums testifies to the willingness throughout the country to provide the accommodation required, and regret must be expressed that this is so often in the form of annexes for chronic cases.

The year's retrospect cannot but be considered as satisfactory, and although it might be desirable that the functions of the Commission should be extended, yet from the amount of work recorded in the report this would not appear possible without an increase in the *personnel* of the present Commission.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 20, 1884.

THROUGH the courtesy of Director-General Dr. CRAWFORD we are enabled to reproduce a very important memorandum by Dr. TIMOTHY LEWIS on the comma-shaped bacillus, stated by Dr. ROBERT KOCH to be the essential cause of cholera. The memorandum gives evidence of having been the result of much labour, and has manifestly been prepared with great care as befitting the importance of the subject brought under review. We will not attempt to epitomise what is already limited to the briefest statement of facts, and we only point out the salient features of the memorandum for the purpose of directing our readers' attention to the document itself. As might have been expected, Dr. LEWIS has taken a deep interest in the recent investigations in which the German and French cholera commissions have been engaged, seeing that, in conjunction with Dr. D. CUNNINGHAM, he had been for several years occupied with like inquiries in India. Profiting by the present vacation at the Army Medical School, he devoted a portion of his holiday to proceeding to the south of France for the purpose, as he states, of renewing his acquaintance with the disease, and of studying afresh the microscopy of the alvine discharges. As a preliminary to his reference to the results of this visit, he submits the history of the German Commission to a brief review, and the results to such criticism as has not hitherto been attempted either in England or on the Continent; indeed, thus far the history of Dr. KOCH'S progress from Berlin to Egypt, a little more than a year ago, and from Egypt to India and back to Berlin, has been a series of apparent triumphs along the whole line. The time has come, however, to submit the results of his inquiries to the test, and the full details of them which have recently been placed before the world are practically an invitation to the profession to weigh them in the scales. This Dr. LEWIS has done, and we think that our readers will be as much surprised when they read his paper as we ourselves were.

In the first place, it is pointed out that the specific organism which Dr. KOCH believed he had discovered in Egypt was a straight bacillus, like the so-called specific bacillus of glanders; that he had, in fact, already discovered them in specimens of intestine from four natives of India which had some time previously come into his hands; but that he had looked upon their presence in the mucous membrane as due to post-mortem changes, until he again found them in connexion with cholera in Egypt, when he felt that they were sufficiently characteristic to afford material assistance in pronouncing on the identity of the disease in both countries. In the course of a few months, however, it was announced that the specific organism of cholera was not straight, but curved or comma-shaped; so that, apparently, as Dr. LEWIS remarks, the microbe first fixed upon had to be abandoned. The culminating point of importance in the memorandum is the announcement that curved or comma-shaped bacilli, identical in size, form, and in their reaction to aniline dyes with those found in cholera, are ordinarily present, to a greater or less extent, in the secretions of the mouths of perfectly healthy persons.

Seeing that as yet the sole argument of any real value which Dr. KOCH has adduced as to such organisms being the cause of the disease, is his assertion of their entire absence from the alimentary canal in any condition save that of cholera, Dr. LEWIS' discovery is one of great moment, for so widespread has the doctrine that such "commas" are the cause of cholera become, that regulations are now said to be in process of formation which shall govern the mutual intercourse of nations during periods of cholera epidemics, based mainly on the results and inferences of the Berlin Cholera Commission in India. To the correctness of the statement that "commas" of this character may be found in the saliva in health we ourselves can testify, having had an opportunity of seeing the preparations to which Dr. LEWIS refers in the table which he gives of the comparative dimensions of the "commas" found in cholera and in the secretions of the mouth. So far as could be judged by passing one slide after another through the microscope (under a sixteenth of an inch oil-immersion objective), we could detect no difference between the curved bacilli in the several slides, and, indeed, in some instances, it appeared to us that it was even easier to demonstrate their existence in the saliva preparations than in those of choleraic alvine discharges. It must be borne in mind that ordinary preparations of the latter present a very different appearance as regards the number of "commas" in the field of the microscope from that presented by "pure cultivation" of them.

Dr. LEWIS does not enter into the question of the possible existence of choleraic, as contrasted with salivary "commas," but simply takes his stand on the common-sense ground that organisms found at the termination of the alimentary canal which are of the same form and size as others found at its commencement are probably one and the same kind. Consequently the *onus probandi* that they are different lies with those who may declare such to be the case.

MR. MUNDELLA'S instruction to Mr. FITCH, when that officially-minded gentleman was directed to append a memorandum to Dr. CRICHTON BROWNE'S report, must have been substantially, if not in so many words, "No case—abuse the plaintiff's attorney." In the very endorsement of the paper to be traversed a most damaging admission is made. The plea that Dr. CRICHTON BROWNE "fired off a letter" at the department over which Mr. MUNDELLA presides is not simply abandoned, but refuted, for "Dr. CRICHTON BROWNE'S *Report*" is thus designated. It was, of course, inevitable that this admission should be made, because the opening sentence of the communication which the Vice-President has so reluctantly given to Parliament and the public cites the terms of the invitation "to inspect a few public elementary schools, and *report* to you my impression as to the effects of their work on the health of the children attending them." Moreover, it transpires that this very Mr. FITCH, who is now commissioned to pour contempt on Dr. CRICHTON BROWNE and his report, was specially instructed or requested to accompany the doctor in his tour of inspection, and, curiously enough, the doctor pointedly

thanks Mr. FITCH for his "courtesy and helpfulness." In fact the whole story lies in a nutshell. Either mistaking his man—and a remarkable passage in Dr. CRICHTON BROWNE'S letter to *The Times* on Thursday lends countenance to this conjecture—or in a moment of overweening confidence in his Department, Mr. MUNDELLA requested Dr. CRICHTON BROWNE to inspect and report on the schools under the Vice-President's official protectorate, doubtless expecting that the report would be favourable, and help to support his policy of inordinate "forcing." When, instead of support, he encountered a crushing and ruinous opposition, Mr. MUNDELLA resorted to the not very dignified or ingenuous artifice of throwing over both the report and the reporter. Had no special pressure been brought to bear on the Department, nothing would have been heard of either; but as BALAAM cursed instead of blessing, and the *contretemps* could not be kept quiet, the Vice-President has called upon his official subordinate to controvert the arguments of his quondam colleague. The manner in which Mr. FITCH has discharged his obligation in this matter *may* be satisfactory to his chief. For the sake of that gentleman we trust it has proved to be so. So far as public opinion is concerned we do not think it is satisfactory, nor can we believe that Mr. FITCH himself so regards it.

The allegations by which Mr. FITCH endeavours to discredit the report of Dr. CRICHTON BROWNE are briefly these:—1. That when he commenced his itinerary "he had no personal knowledge of the working of an educational system; that he had not, as school manager or otherwise, being concerned with the administration of schools; that he had not even been engaged in the ordinary practice which enables a doctor to know something of the children of the poor, their pursuits, and their ailments; and that he had never visited an elementary school." These allegations are probably well founded to a certain extent, though Dr. CRICHTON BROWNE does not admit the whole impeachment. It is true that the critic was not committed to an approval of the educational system he was called upon to criticise, either as school manager or as medical officer retained by authority, and therefore he *was* open to that fatal objection of the official mind—namely, that he could not approach the system on which he was to report with any traditional *penchant* in its favour. Outside the circle of "authority" these very disabilities will, if we mistake not, be held to constitute special qualifications for the formation of an independent judgment; but to Mr. FITCH—more clear-sighted than the Vice-President, who, after all, is only the parliamentary chief—they were absolute bars to the fitness of the inspector. Mr. FITCH did not unfortunately know so much as he has since learned of Dr. CRICHTON BROWNE'S disqualifications when he commenced the itinerary, or he would have put him through a little preparatory training. No inconsiderable, but a very suggestive, part of Mr. FITCH'S memorandum is occupied with an elaborate statement of the precautions he would have taken to prepare the mind of Dr. CRICHTON BROWNE—or, in other words, to have secured a favourable report,—if he had only been better acquainted with the shortcomings of the critic confided to his pilotage. We can fancy how in the secrecy of the bureau Mr. FITCH may have pointed out to the Vice-President the blunder of letting loose so dangerous a critic on the premises of the Department. Only a permanent official really knows how much trouble and difficulty the undisciplined zeal and thoughtlessness of a party chief may bring down on the authority of a Government bureau! The same sort of thing has happened in other Departments, but for the most part they are both controlled, and the closure and the gag are more readily administered. So much for the preliminary objection; let us pass on to the others. 2. The schools inspected by Dr. CRICHTON BROWNE were not fair—i.e., favourable—specimens. In the amplitude of his courtesy and ignorance of his *protégé* Mr. FITCH took Dr. CRICHTON BROWNE to the very schools to which he would *not* have introduced him if he had only known the facts. In short, he showed the nakedness of the land to the man he mistook for a friend, but has since discovered to have been a spy. In his letter to *The Times* the critic directly contradicts this statement. 3. Dr. CRICHTON BROWNE'S method of investigation is "neither prudent nor trustworthy." He stands before a class, say of sixty boys, asks all who ever have headache to hold up their hands." He even does worse than this in the opinion of Mr. FITCH, for "he proceeds to ask all who feel it at the back of their heads, at the top, on the forehead, all those who suffer from it in the morning, in the afternoon, in the evening, successively to hold up their hands." We do not like to hint at the bare possibility that there can be any subject of which Mr. FITCH is ignorant, or we might venture to suggest that perhaps this injudicious and untrustworthy proceeding on the part of Dr. CRICHTON BROWNE was really intended as a crucial test of the accuracy of the statement made by the boys. It may be—we merely say it may be—that a headache is a sort of thing that can only be investigated by asking questions of the sufferer, and that the best possible means of forming a judgment as to its nature and cause would be to ascertain the precise point to which it was referred, so that if a boy complaining of a headache said it was in the front when it ought to be in the back, or *vice versâ*, he would stand confessed as an impostor, or his pain would be shown to arise from some irrelevant cause. We offer this suggestion to Mr. FITCH with much deference, because obviously unless one has been a school doctor under the Educational Department, it is impossible to form any trustworthy opinion. At this point, however, there is one incident which we really must take leave to press on Mr. FITCH'S attention. Granted that he started—as he says he did—in ignorance of Dr. CRICHTON BROWNE'S want of judgment and untrustworthiness and of the badness of his method, how came it to pass that when these defects became apparent, as they must have been after Mr. FITCH had observed his procedure at two or three schools, he did not take him to some of those better establishments where the boys and girls have no headaches, or in official disgust throw up the business? By going on with the inquiry in spite of his discovery that the investigator was incompetent, Mr. FITCH has left it open to ill-natured people to say that he waited until the report was sent in to see the conclusion arrived at, and that if this had only been favourable, the badness of Dr. CRICHTON BROWNE'S method would not have been exposed. As it is, Mr. FITCH contents himself with denouncing the method, and seems to feel aggrieved that Dr. CRICHTON BROWNE did not adopt the plan which proved so successful at Do-the-Boys Hall, and introduce the subject of headaches with a flourish of the brimstone bowl, so that the

children who, as it happened, alleged headaches, might be induced to consider whether these maladies did really exist.

For the rest, Mr. FITCH simply contradicts Dr. CRICHTON BROWNE'S assertions, and pours contempt on his conclusions. This is how he disposes of them:—"I do not hesitate to say that every one of the judgments which purports to have been formed from Dr. BROWNE'S visits to schools appear to me to be hasty and inaccurate, and to have been arrived at by a loose and partial method of inquiry." This is a tolerably bold and strong statement of opinion, and we are not surprised to find its author moved to avow that he makes it "under a considerable sense of responsibility." Had Mr. FITCH considered the matter a little further, he would probably have found the sense of responsibility increase until it reached a degree of tension that caused him to refrain from making the statement at all. Dr. CRICHTON BROWNE in his letter alleges that in the haste of his rejoinder Mr. FITCH has fallen into many mistakes of fact. Notwithstanding the memorandum of Mr. FITCH, Dr. CRICHTON BROWNE'S report will be accepted by the medical profession and, we believe, by the community at large, as the expression of a carefully formed and clear judgment by an exceptionally competent and candid critic. The fact that the conclusion arrived at is not in consonance with the judgment which the Educational Department has formed of its own work, but directly opposed to and strongly condemnatory of the policy of indiscriminate brain-forcing, which has found favour with Mr. MUNDELLA and his subordinates, will not be considered a proof that the Department must be right and its critics wrong; nor unless we misjudge and under-estimate the power of public opinion, will it be allowed to bolster up the system of "grinding tyranny" which not only Dr. CRICHTON BROWNE, but the majority of competent observers, condemn.

THE principal interest as to the present cholera epidemic in Southern Europe centres in Naples, where the intensity of the disease exceeds anything that was experienced in either Toulon or Marseilles. Following upon occasional rumours as to suspected or well authenticted cases of the disease, two definite cholera deaths were admitted to have occurred in Naples on August 27th last. With the exception of one day on which no death took place, the daily deaths varied from one to three up to September 2nd, when a sudden increase occurred, and 67 fatal attacks were registered. A slight abatement then ensued, but within a few days the mortality rose first to 113 on September 7th, then to 275 the next day, and on September 9th the highest mortality of the epidemic was recorded, no less than 493 fatal attacks being returned by the authorities. This terrible severity was maintained for several days, but since the 12th inst. there has been a tendency to abatement. The daily number of deaths, however, still exceeds 250. Unfortunately for its future prospects, Naples is in a thoroughly bad sanitary state, and it is evident that cholera, once imported into the city, found amidst its filth a soil congenial to its further development and spread. The state of panic and confusion which have reigned there, and in other parts of Italy, is lamentable. At Naples the food-supplies ran short, the hospitals became overcrowded to an extent that is almost incredible, and which removed almost the only chance of recovery remaining to many of the patients, and the burial of the dead became partially suspended for lack of the needed materials and labour. The visit of the King of Italy and of Prince AMADEUS to the stricken city, the calm heroism which accompanied that visit, and the improvements which were effected in consequence of the KING'S orders and advice, tended materially to raise the hope of the population. But no such visit can clear away the results of generations of sanitary neglect, and the prospect is one which must still be regarded as of considerable gravity. Fortunately for Italy, which needs to be spared any further calamity, the period which has now elapsed since the KING left Naples enables us to speak with confidence as to his having escaped infection; and we are glad that in a city where he was necessarily exposed to conditions of excremental contamination of air of a peculiarly dangerous sort, the precautions adopted of securing all his food supplies and water from Rome have been successful.

From the public health point of view, the contrast so far exhibited between Rome and Naples is very striking. Cholera was imported into both cities. In Naples, it was met by the very conditions known to favour its diffusion, and a terrible epidemic has resulted; in Rome it found a city prepared with means for the immediate isolation of the earliest attacks, an improved system of sewerage and water-supply, and a state of substantial advance in matters affecting the health of the people; and though more than once imported, the disease has on each occasion been stamped out. In the interests of sanitary progress it is sincerely to be hoped that the improvements effected in the Eternal City may still stand its population in good stead.

At Spezzia and several other places a serious mortality is still maintained, but there are at last some indications of abatement. The news from France is to the effect that occasional deaths still occur in and about the previously infected cities, towns, and villages, and that in some of the smaller places fresh outbursts from time to time take place. On the whole, however, it may somewhat confidently be anticipated that no serious aggravation of the epidemic is now likely to recur. The news from Spain is both contradictory and very uncertain, but although the disease still remains prevalent in such places as Elche and Novelda in the province of Alicante, it does not appear to have made any material headway; and this gives hope for believing that serious extension may, after all, be avoided this year. The lessons of the epidemic have, even at this stage, not been altogether thrown away. Thus, both in France and Italy, the folly of putting any trust in land quaranti a system which received nothing but condemnation at Vienna Conference of 1874, appears now to be recognised, and it may be hoped that this false prop being removed, measures will be adopted for replacing it by something more trustworthy; that the abounding filth conditions of so many towns and villages in Southern Europe will be removed; and that means for proper isolation will be prepared, and so held in readiness as to be capable of immediate application whenever they are necessary. The present epidemic has shown the costliness of preventable disease in more ways than one. Tourists have avoided the infected countries, and already inquiry is being made as to how far it may be safe for invalids to visit the Riviera and the other

southern resorts to which so many English flock during the period which commences with our November fogs and continues till our cutting March winds have ceased. We regret to say that the history of former epidemics in Southern Europe supplies a by no means favourable answer. Thus, when cholera was epidemic in France, fresh invasions of districts and departments continued right up to the end of December; and again in 1873 cholera maintained itself in certain towns up to December 11th, and appearing in Paris on September 5th, it continued there three months, causing 855 deaths. So also as regards Italy; cholera breaking out in 1865 continued through the winter of 1865–66, and it had not ceased in the following spring. That cholera will necessarily be maintained or recur in the districts hitherto affected we do not wish to imply, but where the disease has prevailed in connexion with sanitary circumstances favourable to excremental contamination of air and water, the chances of a renewed or maintained diffusion, owing to retention of the poison, will probably not be inconsiderable; therefore we would advise intending visitors to warmer climates to seek those towns and watering-places which lie at some considerable distance from the infected localities, and to which the disease shall not have extended when the time for migration arrives. So far as we can judge at this date, the south-western coast of France and a very large portion of the coast of Spain, together with Algiers, will be far safer places of residence than many localities along the Riviera. The lapse of another month will, however, tend to clear up doubts that may now exist on this point.

IN the new Royal Warrant of June 10th for "the pay, promotion, and non-effective pay of the army," which has just been issued from the War Office, a clause of great importance has been inserted, regulating the tenure of the professorships in the Medical School at Netley. Hitherto there has been no rule laid down respecting these appointments, which, with the exception of the chair of Military Hygiene which became vacant in 1876 by the lamented death of Professor PARKES, have been filled by their present occupants for the last twenty-five years. While stringent rules have been made and enforced for the retirement of officers of all grades and departments in the army after certain periods of service, or on attaining a specified age, the appointments of the professors entrusted with the special instruction of all medical officers entering the Department have been left untouched, and superannuation has been a term unknown to them. The War Office authorities appear at last to have awakened to the necessity of adopting some measure to ensure the teaching power being kept up to the mark, and provision being made, by the renovation of its staff, to prevent the school becoming a Sleepy Hollow. ARNOLD was of opinion that fifteen years was a sufficient limit for the tenure of the head mastership of a school by any teacher, and the War Office seems to have recognised the practical value of such a rule as applied to the professors, masters, and instructors in the various educational establishments for officers of the army. As regards the Medical Service, the regulation now laid down is as follows:—"The tenure of office of the Professors of the Army Medical School selected from the Army Medical Service, including India, shall be for seven years, or for such shorter period as our Secretary of State may direct, with power of reappointment; but the term of office shall not be extended beyond fourteen years, or beyond the attainment by the officer of the age fixed for his retirement from his rank, whichever may happen first. In the case of a civilian being appointed a Professor of the Army Medical School, the term of office shall not continue after the age of sixty-five years."

Under this regulation two of the Professorships will at once become vacant, the chairs of Military Medicine and of Military Surgery. Dr. DE CHAUMONT, who occupies the chair of Military Hygiene, having entered upon his second septennial period, will doubtless be retained till he has completed fourteen years; while Dr. AITKEN, the Professor of Pathology, will continue to hold his appointment till he attains the age of sixty-five. We consider this move on the part of the War Office to be most judicious, and likely to promote the efficiency of the important medical school at Netley. However much we may regret the retirement of individual professors, we cannot doubt that their place may be efficiently filled up, and that the infusion of young blood into the establishment will promote its utility and, we trust, remove the charge against it that the splendid opportunities afforded by Netley Hospital have not been more fully utilised in the interests of the profession, and especially of the army medical officers. But while we thus approve of the step taken by the War Office, we cannot but regret that no similar provision has been made in the case of another very important body connected with the medical department—the Army Sanitary Committee. From the Army List it appears that Dr. SUTHERLAND has held an appointment on it for upwards of twenty-two years, and from his professional standing he must have considerably exceeded the age laid down as the limit of all army service. We are well aware that he has rendered very good service in that capacity, but the same reasons which have called for the regulation as regards civilian professors in the school apply to him. A period must arrive in every long life when the powers of mind and body become unequal to the amount of work demanded of them in performing important duties, and it is manifest that the question of when that period has arrived cannot be left to the individual most personally interested. Few, very few, men are willing to acknowledge that their day is gone for active work, and hence the necessity for an official limit to an official career. We believe the subject has only to be brought to Lord HARTINGTON'S notice to ensure in the interests of the Service some such regulation being extended to the Army Sanitary Commission.

IT was rightly stated by Lord RAYLEIGH in his Presidential address to the British Association that it is remarkable how many of the playthings of our childhood give rise to questions of the deepest scientific interest. "The top is, or may be understood," he continued, "but a complete comprehension of the kite and of the soapbubble would carry us far beyond our present stage of knowledge." Similar language to that used by the physicist might be held by the biologist, and we might well say if we possessed a thorough knowledge of the simplest mass of protoplasm that can present itself to our observation, we should occupy a more advanced standpoint than that on which we are at present compelled to rest. Great credit is always due to

those who by the study of some elementary subject seek to obtain general principles which are of far-reaching importance. Such work was done by GRAHAM in his admirable researches on the phosphates, and on the process of osmosis, and such work has lately been done by ENGELMANN, who has contributed an excellent memoir on protoplasm movement to the "Handbuch der Physiologie," of HERMANN, which has just been translated by Mr. BOURNE, and published in the *Quarterly Journal of Microscopical Science*. In this memoir Professor ENGELMANN points out that protoplasm possesses not only contractility indicated by the movements it can effect, but irritability indicated by its response to external stimuli and automatism, or the power of initiating movement without any apparent excitation from without. The movements of protoplasm are to be distinguished from the movements which occur during the growth and reparation, and the segmentation and fertilisation of cells, principally by its greater rapidity and the absence of any relation to growth and reproduction, though the limits between the two cannot be sharply drawn. The characters of protoplasm are that it is homogeneous and transparent, almost always colourless, with a refraction index that is higher than water but lower than oil. It is, at least in some instances, doubly refracting in regard to light; it does not mix with water, but can imbibe it; is cohesive and extensile, with but little elasticity. As a rule there is no investing membrane, so that solid particles can be ingested by the outer layer of the body at any chosen spot. It generally presents granules and vacuoles. The granules may be albuminous or fatty, or consist of calcium carbonate, and often present Brownian movements. The vacuoles result from the separation of the fluid in the form of small droplets. In life the reaction of protoplasm is alkaline. ENGELMANN describes three kinds of movement, which he names respectively amœboid, streaming, and gliding. These movements only take place within certain limits of temperature below 0° C. and above 40° C. They are arrested at once and always above and below these limits, the protoplasmic mass usually assuming a rounded form and passing either into a state of cold or heat rigor. The withdrawal of water sends it into a state of dry rigor; but it is remarkable that saline solutions which prove fatal when added suddenly to protoplasm can be borne when the concentration is gradually effected, the organism appearing to be able gradually to accommodate itself to the unusual conditions. The presence of oxygen, though not necessary for the manifestation of movement, is necessary for its maintenance. Pressures of oxygen gas equal to from three to six atmospheres kill protoplasm. Stimuli of various kinds, mechanical, chemical, thermic, or electrical, all seem to impede the movement and to tend to cause retraction of processes and the gathering up of the mass into a compact ball. From the consideration of the various phenomena presented by the different kinds of protoplasm, ENGELMANN believes that we may regard it as an aggregate of most minute contractile excitable form elements, and that the movement as a whole is the result of changes of form of these very small elements. The nature, however, as well as the causes of the changes of form of these elements, remain for the present undetermined. Perhaps with improvements in the microscope, perhaps with the aid of colouring agents, some further insight into the actions and processes taking place in protoplasm may be ascertained.

NO one can fail to be struck by the apparently increasing number of suicides. It may be that the total percentage of these distressing deaths upon the increment of the population has not increased, but it is beyond question that suicide, as a social calamity, has been thrust on our notice of late more than in remoter years. Until the statistical facts are made clear it would be idle to speculate as to the probable cause of this increase, if there be one. It is, however, not merely permissible, but politic, to bestow a passing glance on the subject as a whole. Suicides may be divided roughly into two great classes: those in which the self-slayers are intentionally conscious of what they are doing, and those in which they are either unconscious of their acts or perform them under distinct hallucinations or delusions of idea. This last class—which if not technically definitive will serve for our immediate purpose—is not, we think, a large one. Without hair-splitting, it may roughly be said that the great majority of those who kill, or try to kill, themselves in these modern times and in civilised communities are perfectly well aware of the nature of the act they are performing or attempting, and do the deed with a, so far, intelligent purpose of escaping from misery which seems unendurable, or because of some terror or shame that for the time overwhelms them. The law is mercifully interpreted for the sake of survivors; but, as a matter of fact, scarcely one in a hundred of the so-called cases of "temporary insanity" are correctly so described. It is heart-breaking or brain-tearing trouble that makes men and women long to die or impetuously seek refuge in death, either in the belief that in dying they will sleep or that consciousness will end in eternal oblivion. We do not say that there is a clearly defined process of reasoning in all these cases, though in the majority we believe there is; but in very few instances indeed is the real inner feeling one which differs greatly from the yearning to escape—anywhere, anywhere out of this misery. The rate at which men and women live nowaday has something to do with this feeling. Boys and girls are men and women in their acquaintance with, and experiences of, life and its so-called pleasures and sorrows, at an age when our grandparents were innocent children in the nursery. The young men of the day are *blasé* at two- or three-and-twenty, the young women *ennuyée*. Life is played out before its meridian is reached, or the burden of responsibility is thrust upon the consciousness at a period when the mind cannot in the nature of things be competent to cope with its weight and attendant difficulties. All this has been said before. There is not a new word or a new thought in it, and yet it is a very terrible and pressing subject. We cannot give it the go-by. "Forced" education commenced too early in life and pressed on too fast is helping to make existence increasingly difficult. We are running the two-year-old colts in a crippling race, and ruining the stock. If able and impartial observers would make it their business to ascertain the facts about suicide, they would be doing a good and useful work. We believe, not without some data upon which to base our speculations, that suicide *is* increasing, and that the active cause of the evil is mind-weakness the result of forced development and premature responsibility. Hasty

and too early marriages, too anxious struggles for success in life, too hazardous ventures in business enterprise, the rush of undisciplined and untrained minds into the arena of intellectual strife, and, above all, that swinging of the self-consciousness—pendulum-like—between excess in rigor of self-control and untempered licence, which constitutes the inner experience of too many, are proximate causes of the breakdown or agony of distress which ends in suicide. The underlying cause is impatience, social, domestic, and personal, of the period of preparation which nature has ordained to stand on the threshold of life, but which the haste of "progress" treats as delay. It is not delay, but development; albeit this is a lesson rash energy has yet to learn from sober science.

Annotations.

"Ne quid nimis."

JOHN NETTEN RADCLIFFE.—IN MEMORIAM.

THE death of John Netten Radcliffe not only leaves a widow and her children in mourning, but sensibly depresses a great many members of the medical profession, and would have depressed them much more had not his death been preceded by a long and sad illness that almost reconciled even his friends to parting with him. For nearly two years, under the strain of work of the very best sort, all that was most precious in our friend in mind and body had failed. We try to forget how completely. In another column the nature and bearings of his work are set forth. Here we only give ourselves up to mourn over all that we have lost. To this journal he was no casual contributor, but a guide whose judgment was invaluable in crises and panics when the judgment of most men is apt to be at fault. Under his view the march of epidemics seemed regulated, they were bereft of half their terror, and the true line of duty and safety became clear. In 1866 his prompt and clear investigations put sharp limits to the cholera, and have secured comparative immunity and serenity since. Nor was the value of his judgment confined to questions of public and preventive medicine. He was a wise and experienced practitioner, and choice and a classical in his general and medical reading. There was a wonderful mixture of gravity and humour in his mood. The humour generally prevailed, and though often deep and keen, was always good natured and kind. Only those who had the advantage of knowing him somewhat intimately can tell how kind Radcliffe was, or how deep and practical was his sympathy. It amounted to a strong human affection extremely precious in all the great circumstances of life, and always most reliable when it was most needed, no matter what the trouble, or even the cost, to himself. If there was one part of his nature not sufficiently controlled by his good judgment it was this part. We have not yet heard the last of John Netten Radcliffe. He will be long remembered as one of the men who, under Mr. Simon's masterful lead, has placed the sanitary condition and organisation of this country high in the respect of civilised nations, though still far from realising their ideal. Not the least noticeable feature in Radcliffe was his patience with vestry and board of guardians' human nature. There was so much human nature and common sense in himself, that he could be tolerant even with sanitary authorities and with those who were "out" of sanitary ways. Such is the friend we have lost, such the man lost to the public service all too soon and at a comparatively early age. The work of the public service is very exacting and the remuneration inadequate. The death of Radcliffe, and all its circumstances, may raise the question how best to reward such lives as his and such services as he rendered. Our object here is more limited—we had almost said personal.

DISINFECTING THE SPUTA OF PHTHISIS.

DR. J. SORMANI, Professor of Hygiene at the University of Pavia, gave some interesting details at the Hygienic Congress of the Hague concerning experiments made this year on 150 guinea-pigs with the sputa from phthisis. The object in each case was to ascertain what chemical or other methods would neutralise the bacillus, which it was previously ascertained existed in large numbers in the sputa. The results of these experiments were summarised in the following manner:—1. The bacilli of tuberculosis were generally very difficult to destroy; dryness, exposure to oxygen, putrefaction, and most disinfectants failed to produce any effect. 2. A temperature of 100° C. only killed the bacilli after at least five minutes of ebullition. 3. The artificial digestion of bacilli showed that they were the last of all living organisms to be destroyed by the gastric juices or chloridric acid. A very active digestion is necessary to kill this microbe. A healthy man may destroy the bacilli in his stomach, but an infant or an adult with his digestive faculties impaired would easily allow the germ to pass the stomach intact, and retain its virulence in the intestinal tube. This determined enteric ulcerations &c. 4. The bacillus of tuberculosis can be preserved intact for a whole year when mixed with water. It is probable, though not proved, that it has retained its virulence during that time. Thus drinking water may become the means of propagating tuberculosis. It is probable that contaminated linen retains its virulence for five or six months. 5. Alcohol does not destroy the germ, and hard drinkers often suffer from tuberculosis. 6. Cod-liver oil, ozone, oxygenated preparations, and other similar remedies, have no effect in killing the bacillus, nor are benzoate of soda, salicylate of soda, sulphate of zinc and carbolic acid, iodide of silver, bromide, camphor, &c., of much greater use. They injure perhaps, but do not absolutely destroy the bacillus, at least not in the doses that can be taken without danger. 7. A more decisive action may be attributed to creasote, eucalyptol, pure carbolic acid, the naphthols, and bichloride of mercury. 8. For disinfecting spittoons, carbolic acid solution at 5 per cent. is thought sufficient, and Dr. Sormani asserts that the breath never contains any bacillus. He also suggested that essences of turpentine or eucalyptol should be diffused in the houses as an agent for the destruction of this special germ.

THE FRANKLIN BAY EXPEDITION.

THE account of the medical history of the survivors of the Lady Franklin Bay expedition just given by Dr. Green in the *Medical Record* of New York is full of interest. The unfortunate men who composed the expedition having subsisted on starvation rations for nine months, having nothing but brackish water to drink, no artificial warmth, and living almost continuously in a hut which gave only seventy cubic feet of space per man, were reduced in number from twenty-five to seven, whilst the survivors when rescued were *in extremis*, and were only restored by the greatest care and attention. During the first four months each man received a daily allowance of 14·88 ounces, composed as follows: Meat and blubber, 4·33 ounces; bread biscuit, 6·5 ounces; canned vegetables and rice, 1·4 ounce; butter or lard, 0·75 ounce; soup or beef extract, 0·90 ounce; berries, pickles, raisins, and condensed milk 1 ounce; in addition, the following casual contribution to their larder was made—two seals, one bear, eight foxes, and sixty dovekies. Such was their diet from Nov. 1st to March 1st,

during the cruel winter months, considerably less than one-half the amount required for healthy nutrition, and a bad preparation for the further reduction that followed. During this period, however, only one death occurred, and that from scurvy, the only case that exhibited decided symptoms of that disease among the crew. On March 1st the ration was reduced to meat 6·8 ounces, dry biscuit 3·2 ounces, and an allowance ranging from 1 ounce to 3 ounces of a small crustacean, consisting of four-fifths shell and one-fifth meat; after May 12th, however, no regular ration was served out, and they subsisted entirely on the shrimp, reindeer moss, and the gelatin obtained by boiling the sealskin lining of their sleeping bags. With a view of approaching a state of hibernation, the men, except those told off to collect food, remained in their sleeping bags for sixteen or eighteen hours at a stretch. The men rapidly died, and on June 22nd only seven survived. Those who succumbed died with symptoms of hydrops pericardii. The survivors were found emaciated and anæmic to the highest degree, their bodies emitting a sickly odour of stale urine, and their face, hands, and scalp blackened with soot and dirt; they were excitable and irritable, almost irrational, and ravenously hungry; respiratory movement 12 per minute; pulse 52, soft and compressible; hæmic murmurs over base of heart; bowels obstinately constipated; urine almost suppressed. Temperature 97° F. under tongue. On giving food the urine discharged in the first twenty-four hours became more abundant, but was highly albuminous, and continued so for some time. The account of the sufferings of these men and the symptoms exhibited by the survivors correspond to those detailed by Dr. Richardson in the Franklin Expedition of 1821. Some surprise has been expressed with regard to the absence of scurvy, only one of the men exhibiting decided scorbutic symptoms; but the conditions which bring about this disease were fortunately absent. It is true they had no lime-juice; but during the earlier period the dietary was not of a scorbutic character, as they had berries, pickles, and blubber, which the experience of the Eira Expedition shows possess antiscorbutic properties. In the later stage they were able to collect a sufficient quantity of reindeer moss, which has been abundantly proved by the records of numerous Polar expeditions to be an effectual antiscorbutic. There is, therefore, no reason to think that the experience of Lieutenant Greely's Expedition will modify existing theories regarding the cause and prevention of scurvy. That disease, as has been abundantly demonstrated, is not produced by mere starvation, for so long as in the most scanty dietary there is present an antiscorbutic element, scurvy will not make its appearance.

IMMUNITY FROM CHOLERA AT HYERES.

IN the study of the present cholera epidemic, the position of Hyères is destined to attract a large share of public attention, for the experience acquired in this town offers a twofold interest. First, it is the most ancient, the nearest, and one of the most economical of all the winter stations on the Riviera. It is extensively patronised by the English, and possesses a great variety of climatic advantages which are not easily found even in this favoured region. Secondly, Hyères is within walking distance of Toulon. Eleven miles of orange, olive, and almond groves, of market gardens, strawberry fields, and vineyards, separate this little town, with its 12,000 inhabitants, from the original centre of the cholera epidemic. Naturally, a large number of fugitives, estimated, we are informed, at about fifteen hundred in all, took refuge at Hyères. Of course, out of so large a number there were some who had already contracted the disease at Toulon, and fell ill on reaching Hyères. Dr. E. Vidal, however, whose eminent services were recently rewarded with the Legion of Honour, writes to assure us that none of these cases determined a local outbreak. Hyères, like all the other towns of the Riviera, is still in an insanitary condition—that is to say, most houses have cesspools, pipes remain untrapped, and such sewers as exist are for the greater part defective. But the same may be said of every other town on the Riviera, indeed of every town in France, including Paris. On the other hand, the Municipality of Hyères deserve the warmest praise for their energetic efforts to minimise the evil effects of this state of things. Every watercourse, gutter, and sewer has been carefully and frequently disinfected, and the streets washed three times a day. After each case imported from Toulon the room of the patient was disinfected by the burning of sulphur. This procedure will, we trust, be continued long after the cholera epidemic has ceased, and be applied in all cases of eruptive fever. But something more than this is requisite to account for the remarkable immunity of Hyères. Nearly all the vegetables consumed at Toulon are supplied by the market gardeners of the former town; in fact, the relations between the two towns are those of a suburb to a metropolis. Refugees from Toulon have determined the outbreak of cholera in a number of villages and towns; yet, though Hyères was the nearest town and harboured the largest proportion of refugees, no harm has accrued to its inhabitants. The probable explanation of this phenomenon lies in the granitic nature of the soil. The town, in fact, is built on a rock, an offshoot of the Maure mountains. It has also an excellent water-supply, pumped up from a considerable distance, and not likely to be contaminated. The non-porous nature of the soil, the pure water-supply, and the exceptional cleanliness and rigorous disinfection have so far saved Hyères; but for these fortunate circumstances, it seemed inevitably condemned to share with its neighbour all the horrors of the Toulon epidemic.

COHNHEIM'S LIFE-WORK.

THE subjoined is a list of the literary labours of the late Professor Cohnheim. It is appended to a lengthy and appreciative memoir of his late friend by Dr. Weigert of Leipsic (*Berl. Klin. Wochenschr.*, Sept. 1st), which we should have been glad to reproduce did space permit. This catalogue, however, serves to show how actively and laboriously, and with what profit, Cohnheim worked within the comparatively brief space of twenty years. Were all the writings done by his pupils in the laboratory under his direction added, the list would be far more extended. Weigert gives many of these, but admits that his list of them is incomplete:—Dissertatio de Pyogenesi in Tunicis Serosis, Berlin, 1861; on Inflammation of Serous Membranes, Virchow's *Archiv*, Bd. 22; on Sugar-forming Ferments, ibid., Bd. 28; a Case of Abscesses in Amyloid Organs, ibid., Bd. 33; Two Cases of Mycosis of the Lungs, ibid., Bd. 33; Fatal Trichinosis with Parenchymatous Degeneration of Liver, Heart, and Kidneys, ibid., Bd. 33; on the Terminations of Muscular Nerves, ibid., Bd. 34, and *Centralblatt für Med. Wissensch.*, 1863; on the Minute Structure of Striated Muscle Fibre, Virchow's *Archiv*, Bd. 35; the Pathological Anatomy of Trichinosis, ibid., Bd. 36; Results of an Anatomical Examination of a case of so-called Muscular Hypertrophy (with Eulenberg), Transactions of the Berlin Medical Society, Bd. 1, 1866; Death from Rupture of Varices of the Spleen, Virchow's *Archiv*, Bd. 37; a case of Ileus due to a Gallstone, ibid., Bd. 37, 1866; Metastasis in Cancer of the Stomach, ibid., Bd. 38, 1867; on the Terminations of Sensory Nerves in the Cornea, ibid., Bd. 38, 1867; a Case of Multiple Exostosis, ibid., Bd. 38; on Tuberculosis of the Choroid, ibid., Bd. 39, 1867; on Inflammation and Suppuration, ibid., Bd. 40, 1867; on

Venous Stasis, ibid., Bd. 41, 1867; Experimental Researches on the Communicability of Tuberculosis to Animals (with Bernh. Fränkel), ibid., Bd. 45, 1868; on the Behaviour of Fixed Connective Tissue Corpuscles in Inflammation, ibid., Bd. 45, 1868; on Amyloid Degeneration, ibid., Bd. 54, 1871; Researches on the Embolic Process, Berlin, 1872, Hirschwald; on Keratitis, Virchow's *Archiv*, Bd. 61, 1874; Congenital Striated Muscle-Sarcoma of the Kidneys, ibid., Bd. 65, 1875; on the Results of Embolism of the Pulmonary Arteries (with Litten), ibid., Bd. 65, 1875; on Derangements of Circulation in the Liver (with Litten), ibid., Bd. 67, 1876; Simple Colloid Goitre with Metastasis, ibid., Bd. 68, 1876; Disease of Bone-marrow in Pernicious Anæmia, ibid., Bd. 68, 1876; on Hydræmia and Hydræmic Œdema (with Lichtheim), ibid., Bd. 69, 1877; on Artificial Tuberculosis—Inoculation in the Anterior Chamber of the Eye (with Salomonsen), Reports of the Schleswig Society, 1877; on Acute Pulmonary Œdema (with Welch), ibid.; on the Theory of Tumour Metastasis (with Maas), Virchow's *Archiv*, Bd. 70, 1877; on the Sphere of Pathological Anatomy, Leipsic, F. C. W. Vogel, 1878; on the Effect on the Heart of Obstruction of the Coronary Arteries (with v. Schulthess-Rechberg), Virchow's *Archiv*, Bd. 85, 1881; Tuberculosis as an Infective Disease, Programme of the Medical Faculty of Leipsic, 1879, and by Edelmann, Leipsic, 1879 and 1881; Researches on the Renal Circulation (with Charles Roy); Lectures on General Pathology, Berlin, Hirschwald (1st Edition, Bd. 1, 1877; Bd. 2, 1880; 2nd Edition, 1882).

WATER CISTERNS.

WITH the knowledge that cholera is active in several countries having direct commercial intercourse with England, the state of the water-supply in certain parts of our large towns is not pleasant to think of. Where nothing can be said against the quality of the water itself, the manner in which the house-supply is contrived—the single cistern method—leaves much to be desired. Certain points must be attended to in order that any cistern should meet its requirements satisfactorily. It must be well constructed, well placed, well covered, and well kept. The days of faulty construction are not yet over, but errors in this respect are becoming less and less frequent. The general adoption of zinc lining has removed one source of danger. Pipe connexions, however, are still far from perfect. The overflow, it is true, in many cases finds its outlet above ground, instead of into the sewer as formerly, but the cistern still continues to furnish one common supply for waterclosets and for drinking purposes. The use of water-waste preventers in some districts has indeed placed an efficient trap on the closet communication, but the value of this improvement is limited by its sparing application. A still further stage in sanitation is reached, and that but rarely, where a house is fortunate enough to possess a separate cistern for either purpose. Easiness of access, seclusion from light, and from extremes of heat and cold are important in reference to the position of every such reservoir. One finds, nevertheless, that it is often placed outside the house altogether, high above the ground, and sometimes inaccessible by any door or window. Hence it is exposed to frost and flying dust, and is but rarely cleansed out. If due regard be had to ventilation, it were in every respect much better indoors. A well-fitting lid, not a mere lath sheeting, forms the most suitable cover. Cisterns which fulfil the necessary conditions of structure and relation should not be difficult to keep in order. Whether they shall be so kept must depend upon the industry of their owners. Among rich and poor cases of neglect occur, be the arrangements what they may, and if this be so it is not surprising that the slums should show many instances of gross and filthy carelessness. In them the water-supply is most sparing and the means for its provision unscrupulously economical. Undoubtedly the fittest remedy in their case would be the introduction of a constant service system. The trouble of large cisterns would thus be done away with, and with them one source of danger would be abolished. Wilful waste need hardly be feared, nor perhaps need one expect so poor a population to be carelessly lavish in their use of water for drinking or for personal cleanliness. Plain fittings, their practical purpose once appreciated, would offer no great inducement for theft. This system has been successfully employed in many parts of the country. Its introduction amongst the poorest classes of large towns is little short of a necessity.

SMALL-POX IN LEICESTER.

THE anti-vaccinationists in Leicester now awaiting summons are said to number three thousand. In view of the magnitude of the necessary legal proceedings, application has been made by the local authorities to the Local Government Board for advice in the matter. In the meantime small-pox has made its appearance, and it is singular to learn, yet after all natural, and, we may add, creditable to the common sense of the townspeople, that vaccination has been resorted to in order to prevent it spreading. The precaution comes late, but it may be hoped not too late, to interfere with the experiment on a large scale to which so many inhabitants of the town have rashly devoted their children. The mildness of the present epidemic and its comparative limitation, results almost exclusively due to efficient vaccination in other parts of the country, have much to do with the immunity hitherto enjoyed by Leicester. But it is remarkably true in the experience of every medical practitioner that wherever there are susceptible, that is practically unvaccinated, persons, there, if anywhere, the pestilence will strike. We are not, therefore, surprised that the period of immunity has ended. We do not doubt that the Local Government Board will know how to uphold a sanitary measure as right as it is necessary, even while using such consideration as may be due towards offenders who are possibly misled rather than perverse. The fear is not vain that if their opposition should continue, another monitor—adversity—may yet lead them roughly, if well, to sanction views in the prevention of disease which their fellow-countrymen have long since accepted.

THE CHOLERA EXPERIMENTS UPON ANIMALS.

THE following interesting account of some experiments which two Swiss physicians, Rietsch and Nicati, have been making in the laboratory of the Pharo Hospital at Marseilles, by instructions from the French Government, has been forwarded to us by a correspondent in Paris. They have, in addition to cultivating the cholera microbe as Dr. Koch had done in the same laboratory two months ago, and obtained thousands of microbes from the intestines of cholera patients immediately after death, inoculated a number of guinea-pigs, dogs, and rats, with the deadly disease. The success of these experiments is described by the *Journal de Genève* as complete. The guinea-pigs all died at a minimum interval of forty hours, after symptoms of diarrhœa and cramp, the same as with human beings, while the dogs mostly died four days after inoculation. The guinea-pigs were much more susceptible to the disease than any other kind of animal, and when Drs. Rietsch and Nicati injected some of the contents of a human intestine into their stomachs, they died from the self-same causes which in a similar case would kill a human being. To make the inoculation more effectual, they injected the choleraic secretions right into the duodenum, as they had observed that the bile has the effect

of checking the development of the microbe. The conclusion which they draw from these experiments is that there is a practical mode of diagnosis in all doubtful cases of cholera, and that in such cases it will be sufficient to repeat with the contents of the patient's intestine the direct inoculation into the duodenum of a guinea-pig to ascertain within a few hours whether it is a case of cholera or not. The second conclusion which they draw is a prophylactic one, and it is that the gastric juice and the bile digest the microbes very thoroughly. These two juices are excreted in large quantities during the digestion which follows a meal, whereas they are scarcely excreted at all when it is merely liquid which passes through the canal. This is equivalent to saying that impure water is less dangerous when taken with food than when drunk by itself. The mutual relations of indigestion to diarrhœa are of the same order, and they confirm in every particular the connexion between the cholera and the microbe discovered by Dr. Koch. The Swiss physicians have repeated their experiments two or three times before the staff and students of the hospital, and before several medical men from Barcelona, who had come to Marseilles for the purpose of witnessing the experiments.

HÆMORRHAGE INTO THE CORPUS CALLOSUM.

PROFESSOR W. ERB of Heidelberg records a case in which the rare event of hæmorrhage into the corpus callosum occurred (Virchow *Archiv.*, 97, 2). He remarks that physiology teaches nothing concerning the functions of this structure, and that pathological data concerning it are very scanty. For the most part these latter comprise observations of developmental defects, with corresponding psychical deficiency (Hitzig), but others (Paget, Jolly, Malinverni) have recorded cases in which the corpus callosum has been absent without any manifest mental derangement. Cases of tumours of the corpus callosum are evidenced more by the pressure signs exerted on the hemispheres than on the body itself, and instances of hæmorrhage and softening have very rarely been met with. Gintrac, among 560 cases of cerebral hæmorrhage, gives one involving the corpus callosum, but not a single case is to be found in Canstatt's Year Book from 1851 to 1882. Erb's patient was a man sixty-one years of age, who was found in a wood near Heidelberg in a state of somnolence. He had been attacked six days previously with headache, giddiness, vomiting, stiffness of the neck, and pains in the neck and legs. There was no paralysis nor ataxy; the pupils were small; vision normal; optic discs natural; the urine was albuminous. A few days after admission the rigidity of the neck became more marked, speech difficult and jerking; he moved the limbs slowly, but without tremor, and there was still no evidence of paralysis. In the absence of definite symptoms the idea of cerebral hæmorrhage was discarded, and a diagnosis of subacute cerebro-spinal meningitis suggested. As the case progressed this idea appeared confirmed by the increasing and persistent cervical rigidity, the occurrence of slight spasm of both arms and both sides of the face, frequent vomiting, delirium, and death. The post-mortem examination revealed hæmorrhage with inflammation of the pia mater over the frontal lobes, both on convexity and base, and on the tempero-sphenoidal lobe near the Sylvian fissure. There was a like hæmorrhagic infiltration of the pia mater on the posterior surface of the spinal cord, especially in the lumbar region. So that to a certain extent the diagnosis was confirmed. But in addition to these lesions the corpus callosum was found in almost its whole extent (the anterior extremity alone excepted) to be destroyed by hæmorrhagic effusion, and the lateral ventricles contained sanguinolent fluid. The fornix had disappeared, and the hæmorrhage extended into the gyrus fornicatus. There was also some extravasation into the ascending meso-colon, lobular pneumonia, cystitis and nephritis dependent on a stricture of some standing. Remarking on the occurrence of the callosal hæmorrhage, Professor Erb says it is difficult to say if it were the main cause of death, but it also cannot be said to have had no share in the issue. The corpus callosum was almost wholly destroyed, and yet the case presented no symptoms directly referable to the lesion, all the symptoms which occurred being explicable by the meningeal affection. Even if the slight dulness of intellect and slowness of speech were due to the former, these are but slight grounds from which to diagnose a lesion of the corpus callosum. The case is of value as showing that this structure may be destroyed without producing any disorder of motility, of coördination, of sensibility, of reflex action, or of the special senses, and no appreciable impairment of intelligence. It therefore tells nothing concerning the function of the main commissure of the brain, save that its integrity is not essential to those prime functions of the nervous system.

FORMIC ACID AS A GERMICIDE.

THE conditions of animal life vary immensely; the introduction of a single influence, not apparently of a powerful nature, may determine the death of some organisms. M. Schnetzler, a few weeks ago, communicated some observations to the Académie des Sciences, which serve to illustrate the above general principle. He has found that *bacterium subtile*, one of the most difficult micro-parasites to kill, dies when in the presence of formic acid. Even when this bacterium has resisted the action of boiling-water for one hour, it may be instantaneously killed by formic acid; a drop of water containing $\frac{1}{1000}$th part of formic acid, added to a drop of water teeming with thousands of the bacteria, is sufficient to effect the purpose. The swarming fluid so treated may be introduced into the digestive tract with impunity. The author recommends the trial of formic acid on the cholera bacillus, and it may be suggested that its action on bacillus anthracis is equally deserving of experiment. If formic acid should be found to be capable of destroying the dried virus of charbon, provided this chemical agent does not injure imported wool, and in such a diluted state injury seems impossible, the suggestion that all imported wool be washed in a weak solution of formic acid might be of value in preventing the occurrence of so fatal a disease as malignant pustule and its allies.

MODE OF ACTION OF VACCINATION.

PERHAPS there is no subject which presents a broader field for speculation than the question of the explanation of the effect exercised by vaccination. How does vaccination protect from small-pox? The problem is obviously equivalent to the question, How does typhus protect from typhus? Mr. F. J. Faraday read an interesting paper before the Manchester Literary and Philosophical Society dealing with this matter. It has been suggested that a certain material which is necessary for the development of the vaccine virus is elaborated in the body only rarely or at long intervals. This view is dismissed by Mr. Faraday as being too crude. Without giving our adhesion to this view we may venture to say that the mere crudeness of a theory is not in itself sufficient reason for rejecting it. The gentleman referred to appears to prefer to search for an explanation in some ill-defined "educational influence," developed in a struggle for existence between the causes of vaccinia and the living cells of the body. If we inquire into the nature of this "educational influence," we perceive that it may be expressed in terms of physiological chemistry as an altered molecular condition of protoplasm. The living cells have, so to speak, changed their front, and now are able to

resist an attack from the vaccine virus. The "resisting vigour" resulting from this education Mr. Faraday compares to the apparently instinctive movements observed by Darwin in the tips of the radicles of plants, which Mr. Faraday attributes to an "apparently muscular memory," perfected by practice. There is much foundation for the belief that in nature no experience fails to leave its impress and its influence behind. Were it not so, the difficulty of explaining the phenomena of nature would be almost insurmountable. It is true that many alterations are brought about only after repeated influences, but even then the law holds good; for it is probable that every separate influence exerts some action and produces some alteration, though we may not be able to perceive the minute change. Mr. Faraday pointed, as an illustration of his argument, to the education of smokers, who overcome the nausea caused by the first mild cigar, and educate the cells of which the smoker consists into the enjoyment of even strong Havanas. He concluded by saying that "reduced to its ultimate expression, animated nature would appear to consist of Buffon's organic (organised) molecules *plus* the principle of organic memory, as inorganic nature is inert matter *plus* the principle of motion." Viewed in the light of the principle of evolution, there can be no doubt that protoplasm can register changes which occur in its environment; indeed, this statement involves the whole doctrine of life as enunciated by Herbert Spencer. Protoplasm may be regarded as nothing more than the adjustment of internal to external relations. A living cell is an impressionable epitome of its whole past experience.

TRANSPOSITION OF VISCERA.

A CASE of transposition of the viscera, with details of the post-mortem examination, is recorded by Dr. Alfr. Richter of Dalldorf (Virchow's *Archiv*, 97, 2). The subject was a man born in 1862, who had been thrice treated in La Charité, once for syphilis, once for lung affection, when the "heterotaxy" was discovered, and on the third occasion in April, 1884, for mania, for which he was transferred to the Dalldorf Asylum, where he died. It was observed during life that the heart's impulse was in the fifth right intercostal space, between the mammillary and parasternal lines; the heart sounds were normal. On the left side hepatic dulness extended from the sixth rib to the margin of the thorax. The conditions found after death were as follows:—On opening the abdominal cavity the liver was found lying on the left side, and the heart, which was well developed, lay on the right. The right cavities contained arterial blood and were thick-walled, the auricle receiving the pulmonary veins and the auriculo-ventricular orifice being furnished with a bicuspid valve. The aorta which sprang from the right ventricle passed with the pulmonary artery over the right bronchus, and descended to the right of the spine. The venæ cavæ opened into the left auricle, which was furnished with a tricuspid valve. The right innominate vein was larger than the left; the vena azygos was on the left side; the thoracic duct opened into the right subclavian vein. The right lung had two lobes, the left three; and the right bronchus was smaller than the left. The œsophagus passed from right to left across the aorta; the stomach lay to the right, the pylorus and duodenum to the left, and the spleen to the right. The cæcum lay on the left side, the sigmoid flexure on the right. The right testicle was lower than the left; the right kidney lower than the left. The spermatic artery on each side was given off from the aorta. The writer has collected details of forty cases of transposition of organs, nineteen in the male and sixteen in the female, in five the sex not being stated. In twenty-four of these cases there are records of post-mortem examination. Nine died shortly after birth; but among twenty-two the average age attained was thirty-five years. Of the twenty-four examined after death, seventeen exhibited a complete heterotaxy, and six had further cardiac abnormalities. Among other facts he notes that left-handedness was only observed in one case. Another case of complete transposition of the viscera is recorded in *Le Progrès Médical* (Sept. 13th, 1883) by M. Leveque. The subject was a young woman, nineteen years old, who died from acute meningitis, and the condition was first observed post mortem. In every respect this case tallies with the foregoing, except as regards the pancreas and spleen. The pancreas was reduced to the size of a chestnut, and occupied the usual position of the head of this organ, but on the left side according to the altered position of the duodenum. The spleen was in two portions, each not larger than a nut. The arch of the colon lay behind the coils of small intestines, and terminated on the right in the sigmoid flexure. The renal veins passed behind the aorta, and the spinal column had a marked lateral curvature, the concavity being to the left.

DR. VANDYKE CARTER AND THE SANITARY COMMISSION OF BOMBAY.

IT is with great regret that we learn that the Government of Bombay have taken the exceptional course of reappointing their late Sanitary Commissioner for a further period of four years. The office is one of importance, and it is natural that promotion to it should be looked forward to as the legitimate reward for services rendered to sanitary science and medicine by officers in the Indian Medical Service. There is no one who has more thoroughly earned a claim to such a consideration from the hands of Government than Dr. Vandyke Carter, who has spent the best part of his life in arduous and important scientific research. Our readers may remember his contributions to such subjects as elephantiasis, chyluria, leprosy, and mycetoma, in which he ranks as a discoverer; but, perhaps, the most important and the most fruitful of all was his inquiry into the famine fever, which he proved to be identical with the relapsing fever of Europe, and the studies of the spirillum which he made in this connexion. Everyone must have felt that the British Medical Association did rightly in awarding him in 1882 the Stewart Medal for his researches in these subjects. We trust it is not too late for an act of bare justice to be rendered to Dr. Carter by nominating him to an office for which he is so thoroughly fitted. England is as well able to recognise scientific merit as Germany; but we venture to say that in that country no man of Dr. Vandyke Carter's calibre would be denied the opportunity of serving his country and enhancing his scientific reputation by a promotion, which is not only due to him for his work, but is his by right of seniority.

CHOLERA NOSTRAS.

BY no means the last word has been said respecting the organism which Dr. Koch regards as the essential factor in cholera, and doubtless the main contention will be held over its alleged pathognomonic character. Some researches lately conducted by Drs. Finkler and Prior of Bonn have been published (*Deutsch. Med. Wochenschrift*, Sept. 4th) upon cases of so-called cholera nostras which contravene the statement of Koch that the comma bacillus is not met with in that disease. The observers had taken pains to prepare themselves for the contingency of cholera coming under their notice by examining stools in dysentery, tuberculosis, and other diseases from the bacteriological standpoint. At last, in July, the opportunity arrived; a small epidemic of choleraic diarrhœa occurred in Bonn—twenty-nine cases in all, many occupying the same house. The symptoms were severe, hardly to be distinguished from those of Asiatic cholera, the stools passed in the later stages being almost colourless; but

every patient recovered. In the later evacuations large numbers of micrococci abounded, similar to those found in any case of diarrhœa from whatever cause arising. But when the stools passed in the early stages of the attack were examined, there were found, in addition to small and large micrococci and bacilli of various kinds, some comma-shaped bacilli which accorded in every particular with those described and figured by Koch. They were often found collected in small nests, and mingled with them were a large number of spirilla, which could be best detected in the dried specimens in which the bacilli took the aniline stain less markedly. No such forms were detected in normal fæces, nor in the stools from cases of typhoid, tubercular and dysenteric ulceration, infantile diarrhœa, nor in decomposing urine, mucus and other products; so that a certain specific character was imposed on them. But cultivation experiments (made on linen and on potato) were not successful in discriminating these bacilli; on the contrary, amongst all the forms which appeared in the cultures, the micrococci largely predominated. Feeding experiments upon dogs, previously given croton oil, and upon rabbits, were negative in result. The writers point out the difficulty alluded to at the Berlin Conference by Hirsch, Skreczka, and others in distinguishing clinically between endemic cholera and Asiatic, and aver that the only distinctive feature of this Bonn epidemic was its circumscribed limitation and non-fatal character. Dr. Koch had laid stress upon the detection of the comma bacillus as a means of diagnosis, for he had failed to find this organism in cholera nostras; but Drs. Finkler and Prior point out that the bacillus was only to be found in the early stages, the subsequent watery evacuations, although full of bacterial life, containing none of these special forms. It is, however, possible, they admit, that in spite of the resemblance in form between the bacillus they met with and that described by Koch, their failure to cultivate it may point to an essential biological difference.

THE DRAINAGE OF CAMBRIDGE.

THE filthy condition of the river Cam has at length drawn forth an expression of public indignation. That being the case, we may now hope that steps will be taken to remedy the disgraceful state of things that has been so long permitted to endanger the health of the undergraduates and the inhabitants. The local authorities have endeavoured to shield themselves for their past neglect by the excuse that they were unable to agree with the university authorities with regard to the rates to be paid by the town and university respectively. In 1874, when our commissioner visited the town, on the occasion of the outbreak of typhoid fever at Caius College, it was stated that an Act was in preparation applying for powers to settle this question and proceed with a drainage the ensuing year. Ten years, however, have elapsed since then, and still matters remain *in statu quo*. We are pleased to see, however, that the Local Government Board have at length expressed an opinion that the authorities are not justified in postponing the necessary works pending the settlement of the rating question between the university and the town. There, is, however, another question connected with the sanitary arrangements of the university, and that is the more efficient inspection of the undergraduate lodging-houses. Many of these are in a very unsatisfactory state as regards their interior sanitary arrangements and house drainage; whilst, owing to the imperfect discharge from the main sewers, dangerous accumulations of sewer-gas and even sewage are apt to occur. To guard against the ill-effects of this, special attention ought to be paid to domestic sanitation; yet at Cambridge, now one of the largest medical schools in the kingdom and a university granting a special certificate in sanitary science, the sanitary inspection of the lodging-houses is conducted by a clergyman! Certainly in this respect they manage things better at Oxford, where all the lodging-houses are inspected by a properly qualified sanitary official before being licensed, and are visited during term time to see that all is working efficiently.

EVENING RISE OF BODY TEMPERATURE.

THE daily variation of the temperature of the body is a fact which has not yet been satisfactorily accounted for. Dr. Ringer has observed (Proc. Roy. Soc., xvii., p. 287) a diurnal variation, independent of food or other circumstances, the maximum temperature ranging from 9 A.M. to 6 P.M., and the minimum from 11 P.M. to 3 A.M. M. Maurel recently read a paper before the Académie de Médecine, in which he sought to establish the dominant influence of food in the production of the evening rise of temperature. Light, motion, and alimentation have been investigated in this connexion. By feeding animals during the night and causing them to fast during the day, M. Maurel states he has been able to make the maximum temperature appear at any hour he chooses. The experiments must be prolonged over several days in order to obtain the results. This condition would probably be explained on the principle of habit; and although the term "habit" may be classed as a question-begging epithet, there yet does appear to be something of a true explanation in it. For instance, a patient becomes the subject of a catarrhal affection of the bowels attended with diarrhœa; it is well known that after the disappearance of the signs of catarrh there is a looseness of the bowels to be dealt with, which looseness may perhaps be best explained on the hypothesis of a "habit" of the musculo-nervous apparatus of the intestines. Many other examples readily suggest themselves. The influence of light and movement were found by M. Maurel to have an altogether secondary influence on the temperature of the body.

INSECT LIFE AS A CAUSE OF DISEASE.

THE defenders of the germ theory of cholera may be interested to refer to the able essay "On the Hypothesis of Insect Life as a Cause of Disease," which was published by Dr. (afterwards Sir Henry) Holland in 1839, in his "Medical Notes and Reflections." After recalling the researches of Nyander on the exanthemata viva, the author proceeds to discuss the question, "What weight may we attach to the opinion that certain diseases, and especially some of epidemic and contagious kind, are derived from minute forms of animal life existing in the atmosphere under particular circumstances, and capable, by application to the lining membranes, or other parts, of acting as a virus on the human body?" The arguments, which Dr. Holland advanced in reply, led him to the conclusion that Asiatic or epidemic cholera is a disorder so peculiar in its nature, and spread over the globe in a manner so remarkable, as not to be referable to gaseous, mineral, or vegetable matter diffused in the atmosphere or exhaling from the earth. He deemed equally inapplicable every theory of causation founded on the temperaments, habits, food, or other conditions of particular communities. The hypothesis, which found most favour with Dr. Holland, is that "which looks to animalcule life, diffused by the atmosphere or by man, as the source of the disease;—a form of life not recognisable by our senses, or other direct means of research, but nevertheless subject to some similar laws of propagation and diffusion as species more obvious to us, and producing a virus which acts noxiously on the human body." The author foresaw that his theory, if justified by experience, must of necessity extend to certain other contagia; and the able essay not only oreshadows, on the basis of analogy and circumstantial

evidence, the researches of Pacini and Koch on the cholera bacillus, but is rich in suggestiveness on the wider subject—the germ theory of disease.

TETANUS PRODUCED BY HYPODERMIC INJECTIONS.

DR. PIETRO ROSSI reports in the *Gazzetta degli Ospitali* (7th inst.) a case in which tetanus followed repeated injections of hydrochlorate of quinine. The patient was a youth aged eighteen, of lymphatic temperament, affected with incipient pulmonary tuberculosis. Hydrochlorate of quinine was injected every other day, sometimes twice a day, with much constitutional benefit; but each puncture was followed by slight local irritation, with circumscribed redness and pain under pressure. These symptoms only lasted a day or two. In consequence of febrile exacerbation, the injections were repeated twice a day for three days, alternately in the arm and forearm of the same side. Each time the solution of hydrochlorate of quinine was the same in strength, bulk, and temperature. Four days after the last injection the pain increased at one of the punctures, which became red and turgid. These symptoms were allayed by repeated poultices, and no fever supervened; but the patient complained of great weakness, and of difficulty in moving the jaws when eating. Chloral was at once freely administered by the mouth; but in the course of a few hours all the symptoms of tetanus were developed—trismus, opisthotonos, and pharyngeal constriction, preventing deglutition. Chloral clysters in large doses proved unavailing. Muscular spasms of the trunk increased in frequency and violence, and death occurred suddenly, thirty hours after the appearance of the first tetanic symptoms.

THE RECENT ILLNESS OF MISS ELLEN TERRY.

MISS TERRY is on the eve of departure for a second American tour with Mr. Irving and his company. While we are pleased to be able to state that she is now on a fair way to complete recovery, it may be well to explain that her illness was not due to vaccination, as was popularly supposed. She had been successfully vaccinated on the *left* arm by Mr. George Stoker ten days previously to the appearance of a whitlow on the right thumb. In spite of this, and the warnings of Dr. Fenton Jones, who attended her in this illness, she persisted in going through the fencing scene in Twelfth Night. The inflammation, however, crept up into the forearm, all the flexor tendons becoming very rapidly involved. The thumb was twice lanced and deep suppuration for some time threatened about the wrist-joint. Mr. Jonathan Hutchinson saw the case several times in consultion with Dr. Fenton Jones.

MELANURIA.

AMONGST some of the most interesting phenomena of physiological chemistry are the conditions of the urine as regards its coloured constituents. As is well known, the pigments of urine are not all visible when that fluid is first passed—e.g., the presence of indican requires chemical manipulation for its detection. Zeller has recently observed a rare case of melanuria in a man aged forty-three, who was the subject of multiple melanotic sarcomata of the skin, and who died six weeks after he was admitted to the hospital, of cerebral complications. The urine was of a brownish-yellow colour, absolutely clear, of a density of 1020-1030, free from sugar or albumen. Chemical analysis showed a slight increase in the amount of sulphuric acid discharged; phenol and indican were of normal proportions, but the quantity of hydrobilirubin was largely augmented. There existed a constant relation between the black colouring matter and the bilirubin in the sense that when the urine was light coloured the more urobilin it contained, and the less melanin it had; the darker the urine the more melanin it yielded, and the less urobilin. Bromine water gave an abundant precipitate, yellowish and amorphous, but on resting this changed spontaneously to black. The test with bromine proved to be more sensitive than that obtained with nitric acid or chromate of potash. The precipitate of bromomelanin appeared in the dry state as a brilliant black solid which became a brown powder when triturated. The bromine reaction distinguishes melanin from urobilin, which gives with bromine water a yellow precipitate, not, however, passing into black when left to stand; so that normal and febrile urines do not give the black precipitate when treated with bromine water. Zeller believes that the urinary pigments proceed from two sources, the one being the colouring matter of the bile or blood, and the other aromatic substances developed in the intestine during the process of digestion of albuminoids. It is probable from his observations that melanin is derived from the latter source, though the want of further investigation is admitted.

EXPERIMENTAL TYPHOID FEVER.

SOME interesting observations on the natural history of the typhoid fever poison have been made by M. Tayon and communicated by him to the French Academy. It appears that neither blood nor excreta when taken from a typhoid patient is capable of conveying the infection of that disease when directly injected into one of the lower animals. But if the blood be added to sterilised broth, a turbidity results in about twenty-four hours, due to the development of multitudes of microbes, and the liquid is then capable of inducing typhoid lesions in a guinea-pig, causing death in periods ranging between twenty-five minutes and forty-five hours, and to a less virulent degree in sheep, dogs, and cats. Pigeons, doves, rabbits, and white rats, however, are refractory to this liquid, though in transmission through a guinea-pig the microbes appear to acquire an increased virulence, and are then capable of producing fatal typhoid in cats, sheep, and chickens, after which stage rabbits also are susceptible to the influence of the poison; but in every case an intermediate cultivation is necessary. A guinea-pig inoculated from another guinea-pig produces nothing; whereas if the inoculating fluid be artificially cultivated for twenty-four hours the inoculation is successful. It would appear, therefore, that typhoid germs, which when magnified one thousand diameters appear as small granules or very mobile short rods, unlike the organisms peculiar to charbon, require an alternation of surrounding conditions for their development, resembling in this respect certain intestinal worms.

THE ETHICS OF CANNIBALISM.

THE *New York Medical Record* of Aug. 23rd contains an article on the rescue of Lieut. Greely, and all the questions raised by the ill-fated expedition of which he was the chief. The article has the more interest for being written by one who has had an interview with Lieut. Greely. Alcohol, in the form of whisky, rum, &c., was regarded as of little benefit against cold, or for bracing the system for forced marches. According to the lieutenant, the healthy European or American, with plenty of food, can resist the cold of the Polar regions for a limited time; but each successive winter would witness a rapid deterioration of nervous and muscular energy. With inadequate supplies of food, inducing the condition of *chronic* starvation, the dilapidation of the mental and moral functions comes on apace, involving irresponsibility, in the writer's opinion, and the excuse, if not even the justification, of cannibalism. It is important to remember that he assumes the death of the persons whose

flesh was eaten. When this is assumed, and the practical insanity and consequent irresponsibility of the cannibal is further assumed, there is not much to debate; but the multiplying adventures of an age of quickened activity remind us that it is no light matter in a journal of any authority to find excuses for a practice that has been hitherto the monopoly of the lowest savages. The courts of England will soon have to decide on the conduct of those who, in any extremity, tamper with the feeblest or meanest human life to save their own.

NON-PAYING PATIENTS AT ST. THOMAS'S HOSPITAL.

No ingenuity of statement ought to blind the public to the fact that hospitals, especially endowed hospitals, are for the poor, and for the gratuitous treatment of the poor in the day of their trouble. That St. Thomas's Hospital is obliged to receive pay-patients into some of its wards is true. The more is the pity, and the more the discredit to its past governors. We have no sympathy with the notion that those who live on small wages and in straitened homes ought to pay petty sums for lodging and treatment in our great hospitals. The rich and the poor need to cultivate each other's affection and respect. It will be hard on the rich to deny them the pleasure of providing for the poor man a bed in a hospital when laid aside from work by a grave accident or a graver disease; it will be harder on the poor to make them pay. We are quite of opinion that the working classes *en masse* should give much more to the hospitals than they do. They are rapidly coming to see that they have not done what they might have accomplished by a little systematic contribution at their places of employment. Witness the instance of Messrs. J. S. Fry and Sons, whose employés readily agreed to the deduction of 1*d*. per week from their wages, resulting in a subscription for the half-year of £106 13*s*. 11*d*. But we protest against petty charges to poor people for hospital accommodation. By all means let them pay systematically and in a provident way for ordinary sickness, but for great calamities—and nobody knows but the uncomplaining poor what dire calamities, great accidents, and great diseases are—we hope the day is far distant when English charity will refuse to provide hospitals and dispensaries. They must be either destitute of heart or of imagination who cannot see, that even with 20*s*. or 30*s*. a week, and where work is pretty constant, there is nothing to raise a man above the need of the pity and the help of his richer and more fortunate neighbours.

ELECTROLYSIS OF THE EUSTACHIAN TUBE.

DR. BARTOUX (*Progrès Médical*, August 30th), writing on electrolysis of the Eustachian tubes, commences by enunciating the general principle of chemical galvano-caustics. When an imperfect conductor in conditions of cohesion facilitating its decomposition is placed in the circuit of a pile with sufficient electro-motor power, that body is decomposed; the acid goes to the positive, the alkali to the negative electrode. When the electrodes cannot be attacked, and the interfering substance is of organic nature, the nascent acids and alkalies act on the tissues as potential caustics, and produce an eschar exactly coextensive with the points of contact of the electrodes. In the majority of contractions of the Eustachian tube, due to swelling of the mucous membrane, the author admits that dilatation with elastic bougies is sufficient. But when it fails after being employed a sufficient length of time, he advises resort to chemical galvano-cauterisation. He likewise recommends it when the entrance to the tube is obstructed by hypertrophied lymphatic follicles, and in the comparatively rare cases of membranous bands. He adds that when it is desired to perforate the tympanum, this may be done by affixing one or more needles to the negative pole, and placing the positive one as a metallic plate on the mastoid process, or as a roll of carbon covered with chamois leather held in the hand.

THE INDIAN CHOLERA COMMISSION.

THE recent appointment of Dr. D. D. Cunningham to the important Indian Cholera Commission does not seem to have given entire satisfaction to the officers of the Indian Medical Service. It appears that Dr. D. D. Cunningham has expressed strong anti-contagionist views, and, moreover, by having caused certain sanitary commissioners and medical officers who have ventured to express views contrary to this doctrine to feel the weight of departmental displeasure; it is therefore thought that one so strongly biased can hardly approach the question in a scientific spirit. However that may be, we are somewhat surprised that the Commission contains no other names that would have weight at home. We do not speak of the younger men, those who have distinguished themselves recently at home, who have left England with a high prestige, and whose knowledge of recent pathological methods of research under the guidance of some well-known senior would have proved invaluable, but we speak of men who are of European as well as Indian reputation; for instance, Dr. Vandyke Carter or Surgeon-General Cornish. Certainly, whoever is appointed ought to be free from all previously expressed bias; and although Dr. D. D. Cunningham undoubtedly holds a distinguished position in India, still the reports he has issued, make it doubtful in the opinion of many of the Indian medical officers whether he is the best fitted for the appointment, or, if appointed, whether he should not have been associated with others whose views have been less strongly expressed.

WHY TROPICAL MAN IS DARK.

AN interesting communication has been made to *Nature* by Surgeon-Major Alcock on the reason why tropical man is black. The eyes of many of the lowest animals are generally to be descried by means of the patches of pigment which form their most conspicuous element. It is suggested that pigment placed behind a transparent sensory surface, such as the eye, increases the stimulating effect of rays of light. The well-known absorbent power of dull black things for heat, and the increased activity of all living matter under the influence of warmth, are points bearing on this question. In the negro the pigment-cells are placed in front of the nerve terminations, and here the black pigment in the skin serves to lessen the intensity of the nerve-vibrations that would be caused in a naked human body by exposure to a tropical sun; so that the pigment plays the same part as a piece of smoked glass held between the sun and the eye. The reasoning by which pigment, like the breath in the fable, is made to play the part of hot and cold, does not seem to be perfectly free from objection; but the speculation must be admitted to be interesting.

"TEXAN FEVER" IN BIRKENHEAD.

AN interesting question in regard to cattle disease has been left undecided in the Birkenhead police-court. Two American cattle suffering from Texan fever were slaughtered, and an application to have them destroyed was disputed by the owners. The post-mortem appearances were the following:—The meat was dark-coloured, and, according to one witness, jaundiced; the spleen was tumid and engorged, and weighed about seven pounds; the liver in one case was considerably enlarged, and the heart in both showed patches of extravasated blood upon the surface; the lungs were engorged, and the kidneys of a dark copper colour. The de-

fence rested mainly on the fact that the muscular substance itself could not be said to be decidedly altered, and on the absence of gross lesions in the viscera. It was alleged that such meat, if properly cooked, might be eaten with impunity. The evidence as a whole clearly indicates the presence of disease, and the lesions, both in position and in character, are those of a general fever which has not reached the stage of advanced inflammation. Some of the features are strongly suggestive of anthrax, and the association of high temperature with local extravasation of blood reminds one forcibly of the similar connexion which has been demonstrated of late in the pathology of various septic fevers. It is to be hoped that the present uncertainty will be conclusively settled by the impartial investigation which it is proposed to institute in the next similar case which may present itself, and that skilled experimenters may be obtained for this purpose. Meantime, it certainly seems unwise to expose the meat of such animals for sale, protected only by the doubtful safeguard of a recommendation to cook it well.

THE DISUSED BURIAL-GROUND OF PADDINGTON GREEN.

THE action of the parish authorities at Paddington, in laying out the long-disused burial-ground of Paddington-green for purposes of recreation, appears to be in itself a movement in the right direction. Unfortunately its value as a sanitary measure is greatly marred by other plans and circumstances which are associated with it. A part of the same ground is already occupied by a mortuary, the position of which, even as it now stands, is not entirely free from objection, since it is in close proximity to an iron church, and abuts upon houses in the most populous part of the district. It is proposed, moreover, to enlarge the mortuary, and also to erect an additional building for the reception of infectious cases which may be subject to inquest. This, taken by itself, is no doubt an excellent measure. It evidently aims at obtaining for certain dangerous diseases, as distinguished from other causes of death, especial care in isolation and disinfection. No complaint could be brought against it if the surroundings were appropriate; but they are not. One readily sees that at any time when such diseases were prevalent, frequenters of the adjacent pleasure garden who might be near the mortuary would run considerable risk from infection. In fact, the piece work of the vestry's plan is good, but its combination into a whole, and the relations of that whole, constitute its danger. The difficulty can only be met by either surrendering the project of a recreation ground or of the mortuary additions, or, on the other hand, by enclosing with the latter a piece of vacant land sufficient for their complete isolation, and having no communication by common entrance or otherwise with the area devoted to the enjoyment of the public.

COMPULSORY NOTIFICATION AT DUNDEE.

ACCORDING to Dr. Anderson, medical officer of health for Dundee, the system of notification of infectious diseases in that burgh has proved an unqualified success. The Local Act requires notification both by the householder and the medical attendant. Where that is the case in England, sanitary authorities rarely take any steps to enforce it in so far as the householder is concerned, provided they get the information from the medical attendant. In Dundee, the absence of all friction and complaint, and the almost total absence of concealment, is stated to be due to the fact that the sanitary department strictly exact from every householder the fulfilment of his legal obligation to report, and this quite independently of the medical attendant's report; and it is evidently felt that where the householder himself is bound to report the presence of infection in his household, he can have no ground of complaint because his medical attendant does so also. During 1883 the system of notification revealed two outbreaks of infectious disease in connexion with milk distribution. One was scarlet fever among the customers of a dairyman who did not at the first onset report the disease in his house, but the information came soon enough to prevent a wide outbreak. The next was a wide diffusion of enteric fever, and the magnitude which the outbreak might have assumed may be judged of by the fact that, although, owing to the system of notification, it was absolutely stamped out in twenty-two days, yet it occasioned 132 cases. But for some obscurity as to its origin it would not have lasted even twenty-two days.

DEATH FROM STARVATION IN LONDON.

THE circumstances of the death of Elizabeth Blackwell, investigated by Mr. A. Braxton Hicks, the deputy coroner for Westminster, are very painful reading. Of course she should have gone into the workhouse before starvation did its deadly business and produced that pitiful picture of a woman, sixty years old, too self-respectful to admit her want, honest in paying her way, and then found lying dead on her back on the floor, perfectly naked, with the exception of an old boot on the right foot, in a room which contained not a piece of furniture, but an old jacket, a shirt, and a few pieces of stale bread, fragments of meat and potatoes, "which had evidently been picked up in the gutter," and close by her head an old Bible. No doubt she died dreaming of the City where "they hunger no more." Who is to blame that she did not find this in London with its four millions of Christians? We commend the picture to Mr. Arthur Stocks or some other man in whom Art and human pitifulness meet, that it may stare us in the face till London answers to the description of the Apocalypse.

THE HOSPITALS AND THE HEALTH EXHIBITION.

IT is gratifying to know that his Royal Highness the Prince of Wales has been able to hand over £4000 to the Lord Mayor for distribution among the hospitals of London. The Lord Mayor is, *ex officio*, President of the Hospital Sunday Fund, and it is not unlikely that his Lordship may hand over the amount to be dealt with at the discretion of the Council of that fund. We are still more concerned to know how the Council of the Health Exhibition will deal with the considerable surplus of profit that is likely to accrue to them, and we repeat the expression of our strong conviction that amongst the main purposes to which it should be applied is the foundation of a bacteriological museum and the further assistance of our noble but starved hospitals.

ANILINE COLOURS.

THE prominence which has lately been given in the daily papers to the hurtful properties of aniline dyes in many of their applications is not due to the fact that those properties have now for the first time been demonstrated. Ever since the name of magenta has been known to commerce there have been cases of local inflammation from wearing it or one of its allied colours on clothing next the skin. Distrust of all textile materials stained in this way has consequently long existed among intelligent people. The position in the market which goods thus coloured still hold must be greatly due to the diversity of aniline hues, which enables the compounds of that substance to mimic, while they seem to surpass in finish, the stable and innocuous dyes obtained from various vegetable juices. Fortunately public taste is shrewd enough to perceive that permanence is a point of value in respect of colours as of other things. The same quality affords the most reliable common test that any given

colour is a safe one for daily wear. Those whose means and education enable them to discriminate, and purchase accordingly, run comparatively little risk. Many of the poor are less happily circumstanced in both these particulars. Upon their children it is not unusual to meet with some highly-coloured garment, and to find that the dye disappears in a washing or two. Aniline stained confectionery forms another of their inexpensive pleasures. It cannot be too strongly insisted on that indulgence in either form is purchased at the risk, and often at the price of health, and it may be hoped that recent cases of aniline poisoning will impress this truth.

MACARONI AND CHOLERA.

ITALIAN macaroni, which is largely manufactured at Naples among other places, has become a subject of some animadversion since the marked prevalence of cholera in that city. The alarm of infection is probably in this case not very well founded. Macaroni is in a great measure prevented from acting as a vehicle of this disease by certain valid considerations. The simplicity of its composition is one of its safeguards. Consisting essentially of flour and water, it is open to infection only through the latter of these ingredients, and that under the special condition of a cholera-tainted water-supply, which, so far as we know, has not been shown to exist in Naples. Again, the dryness of this article of diet is sufficient to secure it against acting as an infective agent. The researches of Dr. Koch have proved one point in particular in regard to the causation of cholera—namely, the ease with which the germ which produces it can be destroyed by the mere drying up of its surrounding medium. Without moisture there can be no cholera. Add to these considerations the fact that every choleraic symptom receives in Naples a degree of attention amounting to scare, and that port officials in other countries are on the alert with regard to all Italian produce, and there does not seem to be much reason to fear the transmission of cholera in the way which has been suggested.

THE IRISH PRISONS.

THOUGH the more abundantly Mr. Gladstone labours for Ireland the less he seems to be thanked by her, we are sure that he will find a case in the report of the Royal Commission on Irish Prisons for his strong personal attention. The chiefs of the prison department are on such bad terms as to have no communication with each other except in writing. The prisons are not up to the modern standard; their cost is very great; large numbers of prisoners become insane; inspection is mainly imaginary, &c. These are grave charges, and must be immediately regarded or refuted by the Irish government. But Mr. Gladstone is sure to concern himself about a state of affairs so unsatisfactory.

CRICKET AND SMOKE.

AMONG the defunct clubs of London were some constituted on a curious application of the principle that birds of a feather flock together. There were clubs for men with bald heads, without noses, and with wooden legs. This idea seems to be in process of revival with a new and strange purpose. Cricket is played by smokers against non-smokers, as the war of tennis is wont to be waged by the married against the single. Obviously no more significance attaches to these groupings than would belong to matches in which players with three hundred a year were pitted against players with incomes below a hundred. The notion that tobacco smoking—unless it be in such excess as to produce toxic effects—can affect the power to play cricket is absurd on the face of it. At the same time, the "movement" will not be without its value if it should act as an incentive to boys to postpone the indulgence in tobacco-smoking until they attain to years of discretion. There is nothing more ridiculous than to see mere children with pipes in their mouths. If boys must smoke, let it be short lengths of cane, as was the wont—albeit with great self-sacrifice in the matter of nausea—among youths of the last generation. Tobacco smoking has its uses, as all but its most reckless censors must concede, but to growing boys it is not useful; indeed, in the majority of instances, it is injurious.

INTERMITTENT PULSE.

THE July number of the *Asclepiad* contains a paper by the editor, Dr. B. W. Richardson, on Intermittent Pulse as a Sign of Disease, and its Treatment. The paper is most interesting and practical—in many respects a model paper in practical medicine,—written in way of supplement to a former essay on this subject by the author in 1868. Dr. Richardson, in charging our predecessors with ignoring this symptom and its significance, has forgotten one classical paper, that of Heberden, "Remarks on the Pulse," read at the College of Physicians on July 7th, 1768, in which very much the same views of the significance of this symptom are expressed as those so ably and lucidly set forth by Dr. Richardson. Dr. Richardson's great contentions are that this symptom, in moderate degree, is not of grave import, and may continue over many years without much harm; and that it is purely of nervous origin, "always induced, where it is not inherited, by shocks upon the vital or sympathetic nervous system. Though sometimes associated with organic disease of the heart, it has no necessary connexion with such disease." Most practitioners of experience will agree that in its milder developments this symptom by itself is neither infrequent nor of very grave import. We have known it to be noticeable over nearly thirty years of advanced life without harm. Heberden says: "Some books speak of intermitting pulses as dangerous signs, but, I think, without reason, for such trivial causes will occasion them that they are not worth regarding in any illness, unless joined with other bad signs of more moment." Dr. Richardson's views of treatment should be read with care, and are in the main to be approved. He commends rest, sleep, and good food. The main treatment should be of a supporting character. He tries to be just to the use of alcohol in such states, and he is actually generous in his attitude towards tobacco. Moreover, he lauds opium in extreme forms of intermittency to allay nervous excitement, &c. We are not quite so convinced as he as to the fitness of opium in cases of intermittency where pain has not to be considered; but his views on this point and on the whole question should be studied by every practitioner.

A MANSION HOUSE CHOLERA FUND FOR NAPLES.

WE are glad to read that the Lord Mayor has issued a timely appeal to the charitable on behalf of cholera-stricken Naples. We have no doubt but that it will be speedily and adequately responded to, for in truth it is greatly to the credit of much-maligned human nature that whenever any grievous calamity or catastrophe occurs, willing and immediate help is always forthcoming. In this particular case the claims of sympathy are strengthened by admiration of a king's courage and devotion to his distressed people. It is difficult to limit the amount of good effected by the magnificent example of calm courage shown by his Majesty the King of Italy. When the history of our day comes to be written, the name of King Humbert will assuredly occupy a niche in the temple of fame as that of a hero who did his duty promptly and fearlessly, and was truly the father of his country.

SCURVY FROM ALCOHOLISM.

THE usual conditions under which the scorbutic diathesis is developed are amongst the commonplace knowledge of medicine. Not so, however, is it when we come to consider the intimate pathology of this affection. What the precise antecedents are has up to the present remained obscure. We think it will be granted that some constitutions are more prone to scurvy than others; but whether these constitutions are simply feeble, or more peculiarly altered from what may be termed the normal, is open to doubt. M. Masy, writing recently in the *Journal de Médecine de Bruxelles*, has put on record a sporadic case of scurvy which is alleged to have been due to the abuse of alcohol. The patient was a boy aged thirteen, living under excellent hygienic and dietetic conditions. All the signs of scorbutus were present: the gums were swollen and ulcerated, there were ecchymoses in the limbs and trunk, frequent epistaxis, hæmoptysis, cephalalgia, pains in the limbs and cachexia, leading to death in about three months from the onset of the first symptoms. The youth had early acquired the habit of drinking, and had, on first being seen, just finished a voyage of fifteen days, during which, it is said, he lived on nothing but alcoholic liquors. According to Masy, the alcohol had determined a general "steatosis" of the circulatory system, which fatty degeneration had led to all the symptoms of scurvy. In considering this case, it appears to us that while assigning a significant part in the disease to alcohol, M. Masy has overlooked the negative antecedents—viz., the absence of proper food during, on his own showing, at least fifteen days.

PUTRID FISH.

IT is not surprising that so delicate a food as fish should sometimes become stale in warm weather before any change is noticed, and in spite of care. No such excuse can be urged in the case of a dealer recently convicted at Sheffield of keeping for sale a large quantity of kippered herrings in an utterly putrid condition. Matters were so bad that the shop itself was becoming a nuisance. The fine of £25 which was inflicted may help to persuade all like-minded salesmen that honest profits, if moderate, are still the safest. The judgment in this case is the more important because of the comparative difficulty which attends the detection of fraud on the part of small dealers on their own premises and away from the regular inspection of the market officials. It is also noteworthy, in connexion with a recent prevalence of diarrhœa in Sheffield. The share of fish and, generally, of other than vegetable substances in a putrescent state, in producing diarrhœa, is apt to be underrated. It should not be forgotten, particularly by the poor, who consume large quantities of fish as a cheap form of solid nourishment, that whether cured or "wet," it requires as careful selection as more perishable fruit and vegetables.

ANOMALIES OF DEVELOPMENT AND TUMOURS.

THE interest attaching to any of the relationships of tumours has been well exemplified in an excellent paper contributed to the current number of the *Lyon Médical*. M. Pollosson has recorded four examples of the co-existence of tumours with congenital malformations. The first instance related to a cystic tumour, associated with incomplete development of the structures formed by the branchial arches, the malformations being excentric hypertrophy of the lower jaw and atrophy of the tongue. The second and third cases present the coincidence of arrest in the growth of the long bones and the development of cartilaginous tumours of the digits. These examples furnish an argument in favour of the hypothesis that enchondromata of the extremities are due to a vice in the development of osseous tissue. The fourth case consisted in the co-existence of a congenital lesion of the lymphatic tissues and lymphadenosis, which led to the death of the patient. The congenital lesion of the lymphatics was inferred from the presence of elephantiasis of the right half of the body dating from birth; at the age of twenty-one the malignant lymphadenomatous tumours made their appearance. The details of the case are promised for a later publication.

ENTERIC FEVER AT KIDDERMINSTER.

A SERIOUS epidemic of enteric fever has occurred at Kidderminster, the attacks already falling not far short of 200. By some it is attributed to defective sewer ventilation. This is denied by the borough engineer, who assails the filthy midden system. But a sudden outbreak such as this has been, and one attacking all classes of the community irrespective of social status and locality, has a strong resemblance to a water or milk epidemic. With regard to water we are assured that the town water has successfully stood the test of chemical analysis. Unfortunately the negative evidence of a chemical analysis goes for little, or nothing, when the question of infection is under investigation, and, as is now well known, water to which the medical officer of the Local Government Board had deliberately added a filtrate of typhoid stools was returned by the chemist as ranking amongst those which are of the highest organic purity. Besides which, a pollution which ten days ago might have been responsible for an epidemic may no longer be in operation when the disease appears. What is wanted to be known is whether the wells from which the town supply is derived are in any way subject to the risk of pollution.

THE ANTI-VACCINATION DEMONSTRATION.

THE foolish will do foolishly, and anti-vaccinationists will glory in their shame. It is one of the inconveniences of a free country that people are allowed to make a public display of the fact that nature has not endowed them with sense. The liberty to have small-pox is a form of liberty that we do not care for, and that we object to people possessing, as being highly dangerous to their neighbours. The anti-vaccination orator entirely misses the mark when he abuses the medical profession on account of the Vaccination Laws, as if they were made for the good of medical men. The interests of the profession would be best served by the abolition of vaccination, which would ensure 90 per cent. of the population having long illnesses from small-pox.

THE POLITICAL ATHLETE.

CRICKETERS and bicyclists and boatmen may flatter themselves that they are the athletes of the day, but they are merely rejoicing in their youth. The true athlete of the time is Mr. Gladstone. Whether we regard the physical labour through which he passes, the mental strain which he bears so bravely, or the easy way in which he holds the prize of the first place against all assaults, we must accord him the first place in pure athleticism. The nation has seen nothing like it since the days of Palmerston, whose octogenarian youthfulness excited its admiration. Mr. Gladstone "has fewer years" than Palmerston had when he reached the height of his popularity and power, but his energy is faster and more remarkable. He has not the gay and light mind, the *bonhomie*, that was so characteristic of Palmerston. He is a grave man; he works harder at the great problems of State, of political and international morals, of economics, than Palmerston ever did. Twenty years ago his gravity of nature furrowed his face with care, and

thought in a way that made men doubt whether he would ever succeed to the highest place. And what things have happened since then! What responsibilities he has accepted! What must be the strength of a man who at seventy-five, in spite of such foes and forces and even failures, can hold the prize of the political game as he holds it! We are speaking apart from all political questions and issues; we are speaking from a physiological standpoint, and we pronounce the physical and mental power displayed by Mr. Gladstone in the last fortnight in Scotland, after five years of scarcely paralleled labour, to be a piece of veritable athleticism worthy the study of young men, and a fit subject of pride to the nation.

PERFECT FILTERS.

THE excellent idea of turning to account for sanitary purposes the simple method used by M. Pasteur for separating microbes from their medium of culture has suggested itself to M. Chamberlan. He finds that even the most impure water, after filtration through a porous porcelain tube, is perfectly freed from germs and microbes. Under a pressure of two atmospheres twenty litres of water per day can be obtained from a tube ·20 metre in length and ·025 metre in diameter. Tubes so used can be cleaned by plunging them in boiling water or heating them in a flame till the organic matter coating the exterior is destroyed. He proposes, therefore, that porous porcelain vessels should be used as filtering media, the external surface being exposed to the impure water.

OSSEOUS SUTURE FOR FRACTURED PATELLA.

ON this subject, Professor L. Gosselin expresses himself, in the August number of the *Archives Générales de Médecine*, in the following terms:—"In his thesis on the treatment of transverse fractures of the patella, by arthrotomy and osseous suture, M. Divernoresse has published the following statistics: Eighty-eight cases, with five deaths; two suppurations, followed by amputation of the thigh; fifteen suppurations, followed by anchylosis. It is irrational to follow a plan yielding such results in treating an injury which, under good and patient management, is unattended with any such consequences."

OPEN SPACES IN LONDON.

IT is, perhaps, not yet too late to remind both the Ecclesiastical Commissioners and the Metropolitan Board of Works that one of their most urgent duties, considering the present portentous growth of London, is to preserve, and, if necessary, to restore, at whatever cost, open spaces. Both of these authorities will deserve the gratitude of their contemporaries and of posterity by realising this part of their duty, which we take leave to say is in the greatest danger of being overlooked, with disastrous consequences.

THE HOSPITAL SATURDAY FUND.

IT is too soon to know the success of the present collection as a whole, but we may express our satisfaction at the street collection, exceeding by £500—£2800 against £2300—that of last year, in spite of the wetness of the weather. With the exception of a systematised weekly contribution, noticed elsewhere, the sums from manufactories, &c., seem to us still inadequate.

ACCORDING to MM. Treille and Straus, the comma bacillus is not special to cholera, for they have found the same bacillus in the dejecta of patients suffering from the diarrhœa of Cochinchina, or, rather, the diarrhœa of hot countries.

THE Local Government Board have issued fresh orders as to the importation of rags. One renews the previous order for France, and makes it applicable to the end of this month, and an order for Italy applies for the same period. As yet no such order has been issued as regards Spain. Under these orders sanitary authorities or their authorised officers can require the disinfection or destruction of any rags which it is desired to land, unless satisfactory evidence is forthcoming that they have not arrived from an infected locality. They can also refuse to allow the rags to be landed at all.

MESSRS. CROOKES, ODLING, and TIDY, reporting to Colonel Sir Francis Bolton, official water examiner for the metropolis, on the composition and quality of daily samples of the water supplied to London during August, state that of the 168 samples derived from the seven mains of the metropolitan water companies taking their supply from the Thames and the Lea "the whole were, without exception, clear, bright, and well filtered."

THE Ophthalmological Congress, which had been appointed to meet in Turin from the 15th to the 20th inst., has been deferred for the present, in consequence of the deplorable insanitary conditions of the Italian peninsula.

THE death is announced of Mr. J. J. Woodward, Surgeon, United States Army, the well-known microscopist.

A MEMORANDUM ON THE

"COMMA-SHAPED BACILLUS," ALLEGED TO BE THE CAUSE OF CHOLERA.

BY SURGEON-MAJOR TIMOTHY RICHARDS LEWIS, M.B.,
ASSISTANT PROFESSOR OF PATHOLOGY, ARMY MEDICAL SCHOOL.

WITH a view of studying the phase which the cholera question has now entered upon, in consequence of the publication of the results of the investigations of the German Cholera Commission in Egypt and India, I availed myself of the opportunity which the present vacation at the Army Medical School afforded of proceeding to Marseilles, where the disease has been prevalent since the end of June. Sir Joseph Fayrer was so kind as to enlist for me the valuable assistance of Dr. Le Roy de Méricourt, Médecin en Chef of the French Navy, who, in various ways, did his utmost to further my wishes. Dr. Marroin, the Chief of the Sanitary Department in Marseilles, was so good as to introduce me to the authorities of the Pharo Hospital, where the cholera cases are treated, and where, with the permission of the principal medical officer, Dr. Traatour, I was able to renew my acquaintance with the disease, and to collect material for studying afresh the microscopy of the intestinal discharges.

Before, however, referring to the results of my own observations, it will be convenient to epitomise the published history of the German Commission; to point out the salient features of the results of their investigations in Egypt and in India; and to make a few brief comments on such of the circumstances and conclusions as appear to call for notice. Shortly after the arrival of the Commission in Egypt, Dr. Robert Koch reported, on behalf of himself and his colleagues, that no special micro-parasites had been discovered in the blood, the lungs, the spleen, the kidneys, or in the liver in cholera, but that the intestinal mucous membrane was permeated by certain bacilli which nearly resembled in size and form the bacilli found in glanders. As is well known these bacilli are straight, and are, in fact, uncommonly like the ordinary microphytes associated with decay. Dr. Koch also states in connexion with this subject that he had, previous to proceeding to Egypt, found similar bacilli in the intestinal mucous membrane of four natives of India, but that he had then looked upon them as due to merely post-mortem changes. When he came to Egypt,

however, and found these same bacilli in the intestines of perfectly fresh cases, he felt that an important link was furnished towards establishing the identity of the disease in Egypt with Indian cholera.

It is highly probable that the specimens from India which Dr. Koch had examined were those which were sent, at the request of the Imperial Health Department in Berlin, by the Sanitary Commissioner with the Government of India. These consisted of numerous dry-cover glass specimens of blood which I had collected from several cholera patients, and of portions of the viscera of four natives who had died of the disease. All these were examined by me before they were despatched, and portions of each were reserved for further study. I had heard nothing further of them, but the publication of the remarks above referred to in Dr. Koch's Report of September 17th, 1883, from Alexandria, recalled them to my mind, and I was glad to infer that my own negative results had been confirmed in Berlin. As already observed, no importance had been originally attached to the organisms which were present in the intestinal mucosa. During the last six months I have examined hundreds of stained microtome-sections of these four, and of other specimens of cholera intestines in my possession, and have found that when the mucosa is infiltrated with microphytes at all they are either micrococci, bacteria, or long-oval, and straight bacilli.

In the report of the Commission, dated Calcutta, February 2nd, 1884, Dr. Koch, however, announces for the first time that the specific bacillus of cholera is curved or comma-shaped, and not straight, so that apparently it had become necessary to abandon the microbe first fixed upon. Assuming that the four specimens from natives of India which had been examined by Dr. Koch were those which passed through my hands, the evidence they furnish seems to be in accordance with this view, as in not one of them have I been able to detect any invasion by unmistakable "commas," though at least one of the specimens may fairly be characterised as abundantly infiltrated (in the manner described by Dr. Koch) by straight (and as I prefer to call them) putrefactive bacilli. Judging from my own experience, therefore, any extensive infiltration of the intestinal mucous membrane in cholera by comma-shaped bacilli must be exceedingly rare; and this, I believe, is likewise the experience of the members of the late French Cholera Commission, MM. Straus, Roux, and Nocard, whose acquaintance I had the pleasure of making at M. Pasteur's laboratory on my return through Paris.

Whilst at Marseilles I had, as already stated, opportunities of observing numerous specimens of choleraic excreta, and found that comma-shaped bacilli were, more or less conspicuously, present in all of them, though in some instances more than one slide had to be examined before any could be satisfactorily detected. It may also be mentioned that some of the discharges in which these organisms were present manifested an acid reaction when tested with litmus paper. As Dr. Koch himself remarks, the proportion which the comma-shaped bacilli bear to other organisms in the dejecta varies greatly. In some instances only one or two specimens are to be found in the field of the microscope, while in others they are very numerous, and Drs. Nicati and Rietsch (who are at present engaged in the study of the disease at Marseilles) were so kind as to show me a specimen of choleraic material they had obtained from the small intestine, in which the "commas" existed almost to the exclusion of all other organisms. This is a condition, however, which, I understand, is exceedingly rare. On the other hand, I have seen samples of choleraic dejecta in which totally different organisms prevailed to a like exclusion of others; and in one instance at Marseilles spirilla of various sizes and forms were the most conspicuous of the micro-organisms present. So far, therefore, the selection of the comma-shaped bacilli as the *materies morbi* of cholera appears to be entirely arbitrary.

Dr. Koch and his colleagues have adduced no evidence to show that they are more pernicious than any other microbe; indeed, as a matter of fact, the sole argument of any weight which has been brought forward in favour of the comma-shaped bacillus being the cause of cholera is the circumstance that it is more or less prevalent in every case of the disease, and that the German Commission had not succeeded in finding it in any other. With regard to the suggestion that the cholera process may in some way favour the growth of these bacilli, and that these are not necessarily the cause of the disease, Dr. Koch remarks, in the report from Calcutta above cited, that such a view is untenable, inasmuch as it would have to be assumed "that the alimentary canal of a person stricken with cholera must have already contained these particular bacteria; and, seeing that they have invariably been found in a comparatively large number of cases of the disease both in Egypt and India—two wholly separate countries,—it would be necessary to assume, further, that every individual must harbour them in his system. This, however, cannot be the case, because, as already stated, the comma-like bacilli are never found except in cases of cholera."

LENGTH AND WIDTH (IN MICRO-MILLIMETRES*) OF COMMA-SHAPED BACILLI IN CHOLERAIC MATERIAL AND SECRETIONS OF THE MOUTH IN HEALTH.

Numbers.	Choleraic Material.					Secretions of the Mouth in Health.		
	Alvine discharges.			Intestinal contents. [autopsy.]	Cultivation in agar-agar jelly.			
	I.	II.	III.			I.	II.	III.
	μ	μ	μ	μ	μ	μ	μ	μ
1	2·4 × 0·40	2·0 × 0·60	1·1 × 0·25	2·0 × 0·40	1·6 × 0·40	2·0 × 0·50	1·4 × 0·35	1·5 × 0·50
2	2·6 × 0·40	2·5 × 0·65	1·8 × 0·35	1·2 × 0·40	1·4 × 0·60	1·3 × 0·35	2·0 × 0·40	1·3 × 0·50
3	2·0 × 0·50	3·2 × 0·70	2·0 × 0·60	1·5 × 0·45	1·8 × 0·50	1·6 × 0·40	1·7 × 0·40	1·0 × 0·30
4	2·2 × 0·45	3·0 × 0·70	3·0 × 0·70	1·3 × 0·60	2·0 × 0·50	1·2 × 0·35†	1·3 × 0·45	1·2 × 0·40
5	2·8 × 0·35†	2·5 × 0·60	2·2 × 0·50	2·1 × 0·50†	2·6 × 0·45†	2·2 × 0·65	2·1 × 0·50	2·7 × 0·50
6	1·5 × 0·35	2·0 × 0·50	1·6 × 0·40	1·2 × 0·50	1·1 × 0·35	2·0 × 0·40	2·8 × 0·40†	1·4 × 0·55

* One Micro-millimetre (μ) = ·001 millimetre [= $\frac{1}{25400}$"]

† S-shaped comma bacilli.

Had Dr. Koch and his colleagues submitted the secretions of the mouth and fauces—the very commencement of the alimentary canal—to a careful microscopic examination of the same kind as that to which they have submitted the alvine discharges, I feel persuaded that such a sentence as the foregoing would not have been written, seeing that comma-like bacilli identical in size, form, and in their reaction with aniline dyes, with those found in choleraic dejecta, are ordinarily present in the mouth of perfectly healthy persons.

[Since this memorandum was submitted I have observed that Dr. Koch states, in his recent address on the subject, that after his return to Berlin he had examined, amongst other things, the secretions of the mouth for comma-shaped bacilli, but had found none; and, further, that he had consulted persons of much experience in bacterial researches as to whether they had ever seen such organisms, and was told that they had not. It may be of assistance to future observers if I give the dimensions of half-a-dozen comma-shaped bacilli, as found in each of the following: (*a*) In the alvine discharges of three cholera-affected persons; (*b*) in the small intestine of a person who had died of the disease, and in whom they existed almost to the exclusion of other organisms; (*c*) in a cultivation of them in agar-agar jelly; and (*d*) in the secretions of the mouth of three healthy persons, ranging from four to fifty years of age. The measurements were made (with the valuable assistance of Mr. Arthur E. Brown, B.Sc. Lond., under a magnifying power of 1000 diameters, a Powell and Lealand's $\frac{1}{12}$th of an inch oil-immersion lens, with a wide angle condenser, being used.] See Table, *supra*.

There is no difficulty in putting this statement to the test; and to any one acquainted with the methods ordinarily

adopted for staining and mounting fungal organisms of this character, no special directions need be given. The procedure followed by me to demonstrate these "commas" in the saliva is precisely that adopted for finding them in the dejections. A little saliva should be placed on a cover-glass (preferably in the morning before the teeth are brushed), and allowed to dry thoroughly, either spontaneously or aided by a gentle heat. The dry film thus obtained should be floated for a minute or two with one or other of the ordinary solutions of aniline dyes adopted for such purposes, such, for example, as fuchsine, gentian-violet, or methylene blue. The cover should then be gently rinsed with distilled water, and the film re-dried thoroughly. The preparation may now be mounted in dammar varnish or Canada balsam dissolved in benzol, and should be examined under a $\frac{1}{12}$th or $\frac{1}{18}$th of an inch oil-immersion lens.

As in choleraic discharges so in the saliva, the number of comma-shaped bacilli will be found to vary greatly in different persons, and at different times in the same person. Sometimes only one or two "commas" will be seen in the field, at others a dozen may be counted, and, occasionally, little colony-groups of them may be found scattered here and there throughout the slide.

It may be remarked in passing, and as bearing upon what has been already said regarding the general absence of comma-shaped bacteria from the intestinal mucosa itself, that they do not appear to manifest any special tendency for attacking the decaying epithelial scales of the mouth, but that, on the contrary, they are for the most part found free in the fluid, the epithelium being studded with other bacterial forms.

Persons who have not been in the habit of examining dried saliva-films will probably be surprised at the number and variety of the organisms which are, more or less, constantly to be found in the mouth, and especially at the number of spirilla with which the fluid is generally crowded.

The alvine discharges in cholera sometimes swarm with precisely similar spiral organisms, and, indeed, as has long been known, the fluid exuded into the intestines in this disease is peculiarly suitable for the growth of these and allied microbes. But, so far as my own experience—dating from 1869—of the microscopic examination of such a fluid goes, all the microphytes ordinarily found in it are likewise to be found, to a greater or less extent, in the secretions of the mouth and fauces of unaffected persons. And with reference to the comma-like bacilli found in cholera, to which such virulent properties have been ascribed, I shall continue to regard them as identical in their nature with those ordinarily present in the saliva until it has been clearly demonstrated that they are physiologically different.

INSANITY IN NEW SOUTH WALES.

IN his report for the year 1883, Dr. Norton Manning, the Inspector-General of the Insane for New South Wales, gives the number of insane persons in the colony on Dec. 31st as 2403—viz., 1474 male and 929 female. This is an actual increase, as compared with the same date in 1882, of 96—44 males and 52 females; but the rate of increase among the insane in proportion to the general population is stated to be somewhat less than usual. The returns given show that, "though during the ten years from 1864 to 1873 there was a considerable increase in the proportion of insane persons under care, and in the number admitted, there has been little or no increase during the last ten years either in the accumulated cases or in the admissions or 'occurring cases' in proportion to the general population, and that the 'burden,' as it is fitly called, of insanity, is at a standstill." A comparative statement is made as regards the proportion of insane to population in the colony and in England. From this it appears that in England there has been a steady increase in the proportion from the year 1864, when it was 1 insane person in 457 of the population, down to the year 1882, when it was 1 in 348. It also appears that a general, though less steady, increase has taken place in the colony from 1 in 399 in the year 1864, to 1 in 354 in the year 1882. At the end of the year 1881 the proportion stood at 1 in 352 both in the colony and in the mother country, a point which cannot fail to give interest to the comparative statistics in years to come. The insane in New South Wales are distributed in varying proportions through five hospitals for the insane and one licensed house. The hospitals are overcrowded, and they contain as many as 232 in excess of the 2025 for whom accommodation is provided. The inspector-general is taking measures to remedy this unwholesome state of affairs, which is in a great measure due to the accumulation of aged and quiet patients, who in Great Britain are ordinarily provided for in workhouses. The percentage of recoveries on admissions and readmissions for the year was 40·7, and the percentage of deaths on the average number resident was 6·6—males, 7·7; females, 5·0.

There were 476 admissions and readmissions during the year; and in only ten, or a little over 2 per cent., of these was hereditary influence ascertained. This is a small proportion, and if an explanation were looked for, it might be found in the absence of relatives who could give information regarding individual waifs and strays who wander "far from their home," and are unable to give any reliable account of themselves or of their belongings. And, indeed, a reference to Table 9 seems to bear out this idea, for, from figures there given, only 23 per cent. of the entire insane population were natives of New South Wales, leaving a burdensome margin for the immigrant population, largely drafted from the restless and wandering element of humanity, and represented by individuals who too often, apparently, arrive by sea, if they are not actually shipped, in a state of positive insanity. The report states that after a lengthy correspondence the French Government have agreed to retain and provide for the insane persons of British nationality who become insane in New Caledonia, in the same way as has been done for years past by the Government of New South Wales in regard to persons of French nationality who are thrown upon their hands. During the year, thirty patients had been discharged as relieved to the care of friends; but it has not yet been found practicable to take any steps towards "boarding out" patients, or placing them with strangers paid for their maintenance. The circumstances of colonial life, especially when of the "bush" type, the absence of suitable village homes, and the relations of labour and wages, combine to form a group of obstacles to the adoption of the system, and these obstacles are not likely to be readily overcome. The number of escapes was thirty-one, and all, with one exception, were recaptured within fourteen days, the great majority having had a run of less than twenty-four hours.

The accidents and injuries do not appear to have been numerous and none of them were fatal. There was only one suicide; in the case of a male patient who cut his throat with a piece of glass bottle. With regard to restraint, we are informed that it is never used without the direct order of a medical officer, except in institutions without a resident medical officer, where the superintendent may place a patient in restraint with the subsequent sanction of the visiting medical officer. The propriety of permitting any layman to place a sick person, or an individual under medical treatment, in a camisole or strait-jacket cannot be upheld, and it would be well that such an anomalous exception were done away with. Restraint is not, however, very largely used, for the returns sent to the inspector-general show that the amount never exceeds one patient in restraint out of every 400, and is frequently much less, and that in half of the cases it is employed for surgical reasons. The inspector-general sums up his experience of restraint in the following terms: "Under proper regulations it has a useful place in the treatment of insanity, and I hold that the position taken by the physicians of American hospitals is in this respect more philosophical and more humane than the extreme views held by some alienists in Great Britain." No general statement is given of the amount of seclusion that was had recourse to, although it may be gleaned that in some of the asylums, at least, it is not extensively made use of. The average weekly cost per patient in hospitals for the insane in New South Wales is 12*s.* 5$\frac{1}{2}$*d.*, being 2*s.* greater than that in English borough asylums, which is 10*s.* 5$\frac{1}{2}$*d.* The main difference in cost is due to the amount for salaries and wages of attendants, nurses, and servants being larger in this colony than in England. It could have been a useful piece of information if the report, dealing as it does with so many attractive points of detail and management, had given the relative proportion of attendants, nurses, &c., to the insane population, for this is an important factor in the safe and successful administration of asylums.

Altogether, the report is highly interesting and instructive, and shows excellent results. It appears, on the face of it, to be an honest record of good and useful administrative and inspectorial work among the insane of New South Wales.

INTERNATIONAL MEDICAL CONGRESS AT COPENHAGEN.

SECTION OF MEDICINE.

Chronic Diarrhœa and Dysentery in Persons returned from Hospital to Temperate Climates.—Sir Joseph Fayrer (London) and Dr. Joseph Ewart (Brighton), after summarising the pathology, etiology, and symptoms of these dangerous affections, strongly recommeded a pure milk diet to the exclusion of all medicine, excepting, occasionally, lime-water, five minim doses of laudanum and fresh bark, and a saline aperient to overcome any troublesome portal congestion that may be found to interfere with digestion and assimilation. They have found "that by absolute rest, the maintenance of the surface at an even temperature in an airy well-ventilated room, and milk alone, either pure or diluted if necessary, given at first in small quantities every half hour or every hour, suitable to the digestive powers of the patient, gradually increased as these and the diarrhœa improve, until three or four quarts for an adult are consumed in twenty-four hours, recovery is rapidly effected in a vast majority of cases." Their views are backed by a record of ten cases illustrating the advantages of this mode of treatment.

SECTION OF MILITARY MEDICINE.

Sunstroke and Thermic Fever.—Sir Joseph Fayrer, in a paper on this subject, devoted much attention to the general effects of heat in causing impaired health in hot climates. He then summarised the three forms in which the direct or indirect application of heat may be emphasised and expressed: 1, in syncope from exhaustion; 2, an analogous condition in which the respiratory centre is involved; 3, overheating of the whole body with thermic fever of great intensity. The treatment of each of these conditions was carefully elaborated, with a view to reduce temperature without undue lowering of vital power; and caution was enjoined in not lightly sanctioning a return to hot climates of those who had once suffered from insolation. This is the rule that should be observed.

Typhoid or Enteric Fever among Soldiers in the Tropics.—Dr. Joseph Ewart (Brighton) dealt with this important subject. He pointed out that until it was recognised by Scriven among Europeans, and himself among natives, thirty years ago, it had been grouped among continued and remittent fevers. The returns now show that it causes more deaths among the troops in India than cholera. Facts are given which go to show, first, that its prevalence is altogether independent of malaria, and, secondly, that it is intimately related to rise of temperature. He does not encourage the use of the term "typho-malarial" for cases complicated with malarial poisoning. "It would be as reasonable to call a case of small-pox ushered in by ague, liable to recur and modify the course and character of the exanthem, if not controlled and checked by quinine, variolo-malarial fever." The etiology is exhaustively dealt with, and it is pointed out that, as contended by Sir Joseph Fayrer and others, "it is quite possible that the fæcal filth theory of causation may not cover the whole ground, and that the poison may perhaps thrive and propagate in other kinds of filth."

THE CHOLERA EPIDEMIC—ROME, MADRID, THE PYRENEES.

THE official bulletin in reference to the cholera issued at Rome on the 17th inst. reported from the provinces as follows:—Benevento, 1 case; Bergamo, 12 cases, 3 deaths; Caserta, 4 cases, 2 deaths; Chieti, 1 fatal case; Cremona, 5 cases, 1 death; Coni, 17 cases, 12 deaths; Genoa, 24 cases, of which 11 were at Spezia, and 12 deaths, 10 being at Spezia; Reggio d'Emilia, 2 cases; and Turin, 2 cases. In the city of Naples the bulletin shows that from midnight of the 15th inst. to midnight of the 16th inst. there were 463 cases and 158 deaths. In addition, 107 of the patients previously under treatment succumbed. In the remainder of the province of Naples there have been 51 cases and 25 deaths.

The bulletin issued at Madrid states that on the 16th inst. 9 cases of cholera and 7 deaths occurred at Elche, 1 death at Novelda, and 3 cases and 3 deaths at Monforte. In the province of Lerida 3 cases have occurred at Torres de Segre. In the province of Tarragona there have been several cases, and 6 deaths during the last few days at Borjasdel camps. At Benifallet there were 30 cases on the 16th, and 8 deaths occurred during the 14th, 15th, and 16th inst. At Mora de Ebro there have been two cases, and at Ribarroja 4 cases and 2 deaths.

The accounts published in Paris on the 17th inst. announce 18 cases of cholera during the previous twenty-four hours in the Pyrenees Orientales, of which 3 occurred at Perpignan and 1 at Port Vendres.

PRIZES AND SCHOLARSHIPS IN THE METROPOLITAN MEDICAL SCHOOLS.

THE following are the principal prizes, &c., awarded for the session 1883-84 in the various London medical schools:—

ST. BARTHOLOMEW'S HOSPITAL MEDICAL COLLEGE.—Lawrence Scholarship and Gold Medal: S. O. Habershon. Brackenbury Medical Scholarship: A. H. Garrod and G. C. Murray. Brackenbury Surgical Scholarship: W. T. H. Spicer. Senior Scholarship in Anatomy, Physiology, and Chemistry: W. G. Spencer. Open Scholarships in Science: F. M. Brown and J. G. C. Colly, equal; and H. G. Adamson and S. Blackmore, equal. Preliminary Scientific Exhibition: J. Wilkie. Jeaffreson Exhibition: S. Wilkie. Kirke's Gold Medal: S. O. Habershon. Bentley Prize: A. G. Francis. Hichens Prize: H. D. Rolleston. Harvey Prize: T. W. Green. Practical Anatomy, Junior: Treasurer's Prize, T. J. Dabell. Practical Anatomy, Senior: Foster Prize, T. W. Green.

LONDON HOSPITAL MEDICAL COLLEGE.—Entrance Science Scholarships for proficiency in the subjects required for the Preliminary Scientific M.B. Examination at the University of London: £60 Scholarship, G. G. Borrett; £40 Scholarship, C. R. Killick. Buxton Scholarships for proficiency in the subjects required for the preliminary Examinations: £30 Scholarship, H. E. Fernandez; £20 Scholarship, A. Fagan. Clinical Medicine: £20 Scholarship, H. Cropley. Clinical Surgery: £20 Scholarship, W. T. Rees. Clinical Obstetrics: £20 Scholarship, J. M. Evans and S. R. Hodge. Letheby Prize for proficiency in Chemistry: £30, Kelson and Rowden, equal; prize divided. Anatomy, Physiology, and Chemistry: £25 Scholarship, H. Smith. Anatomy and Physiology: £20 Scholarship, Ashe. Dressers' Prizes, for zeal, efficiency, and knowledge of Minor Surgery: £15 prizes, N. R. Howse and W. T. Mould; £10 prize, E. J. A. Haynes; £5 prize, G. C. W. Wright,

GUY'S HOSPITAL MEDICAL SCHOOL.—The Treasurer's Gold Medal in Medicine: Albert Martin, M.B. The Treasurer's Gold Medal in Surgery: George E. C. Anderson. The Mackenzie Bacon Prize for Ophthalmoscopy: James Henry Targett, M.B. The Mackenzie Bacon Prize for Nervous Diseases: William Leonard Braddon. The Burdett Prize for Hygiene: Hubert H. Du Boulay. Fourth-year Students: George E. C. Anderson, first prize, £25; William Leonard Braddon, second prize, £10. Third-year Students: Frederick Lever, first prize, £25; Sidney Wacher, second prize, £10. Second-year Students (Joseph Hoare prizes): Henry W. Drew, first prize, £25; Frederick François Burghard, second prize, £10. First-year Students: Ernest Henry Starling, first prize, £50; Guy Bellingham Smith, second prize, £25.

KING'S COLLEGE.—Winter Session.—The Jelf Medal: John Power Gray. Warneford Endowment: Albert Carless and John Power Gray, prizes. Leathes' Endowment: Albert Carless and Richard John Stephens, prizes. Divinity:—Third year: Benjamin John Wright, prize. Second year: Horatio Nelson Baron and Philip Henry Henaley, prizes. First year: Harold Burgess Osburn, Jeremiah Penny and Henry Smith, prizes. Anatomy: Charles Drinkwater, prize. Physiology: Henry Alexander Pope, prize. Chemistry: George Hartley O'Reilly, prize. Medicine: John Power Gray, prize. Clinical Medicine: Francis James Warwick, prize. Surgery: Obadiah Johnson, prize. Clinical Surgery (Professor Wood): John Frail Harries, prize. Clinical Surgery (Professor Lister): Robert Chambers Priestley, prize. Comparative Anatomy and Zoology: John Major Bull, prize.—Summer Session: The Tanner Prize: Frederick Arthur O'Meara. Obstetric Medicine: Albert Carless, prize. Forensic Medicine: Philip Percy Manning,

prize. Materia Medica: George Hartley O'Reilly and Henry Smith, equal, prizes. Practical Chemistry: Allan James M'Nab, prize. Botany: Herbert Stanley Ballance, prize. The Carter Gold Medal and Prize for Botany: Jeremiah Penny. Pathological Anatomy: Albert Carless, prize. Practical Physiology: George Arthur Bray and Herbert Arthur Smith, equal, prizes. Practical Biology: Payton Todd Beale, prize. The Todd Prize for Clinical Medicine: Robert Loxham Hildyard.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—The Treasurer's Prize, value £10 10s.: P. Pinhorn. The Thompson Medal: Robert Trevor. The Pollock Prize in Physiology: Arthur Heygate Vernon. Sir Charles Clarke's Prize for good conduct: Richard Emmett.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.—Entrance Exhibitions: 1, C. J. Lownds (Houldsworth), value £40 per annum; 2, F. R. P. Taylor and C. S. Vines, equal, value £40. Treasurer's Prize for First Winter subjects, value 20 guineas: W. Powell. President's Prize for Second Year subjects, value 20 guineas: C. Burt. Chadwick Prize, value 20 guineas: W. Weaver. Bird Prize, value £15: J. Swain. Clinical Medicine, value £5: W. Weaver. Clinical Surgery, value £5: W. Weaver, J. Swain. Class Prizes and Certificates: Anatomy, Senior Class: C. Burt; Junior Class: A. H. W. Hunt (prize). Physiology, Senior Class: C. Burt; Junior Class: W. Powell. Histology, Senior Class, C. Burt. Chemistry, Senior Class: W. Powell (prize). Medicine, Senior Class: W. Weaver (prize). Surgery, Senior Class: W. A. Wills (prize).

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—Scholarships in Natural Science of £50: J. T. Bays, N. C. Ridley, W. B. Bottomley, and H. A. Kidd. Exhibition of 25 guineas: M. M. Bird. Scholarships in Pathology: G. A. Allen and A. Hastings Stewart. Scholarship in Anatomy: G. W. H. French. Prosectors: G. A. Barton and J. J. Clarke. Rolleston Prize, Biology: E. Evans. Prizes in Physiology: Callender and E. Evans. Summer Session, 1883: Materia Medica, J. J. Clarke, prize. Botany: J. J. Clarke and W. Williams (equal), prize. Practical Chemistry: G. A. Barton, prize. Midwifery: J. Q. Bown, prize. Medical Jurisprudence: G. N. Caley and G. Spear (equal), prize. Winter Session, 1883-84.—First Year—Anatomy and Histology: J. T. Bays, first prize; H. S. Collier, second prize. Chemistry: J. C. Barr, prize. Second Year—Anatomy and Physiology: J. J. Clarke, prize. Third Year—Medicine: J. Q. Bown and G. N. Caley (equal), prize. Surgery: J. Q. Bown, first prize; H. Tanner, second prize. Practical Surgery: H. Tanner, prize. Pathology: E. Evans, prize. Third and Fourth Years—Clinical Medicine: J. Q. Bown and — Fernandez, prizes. Clinical Surgery: G. N. Caley, prize. Prizes in Ophthalmology of £10 10s. each: A. H. Willoughby and G. A. Allen.

THE MIDDLESEX HOSPITAL MEDICAL SCHOOL.—Broderip Scholarships, for the best examination at the bedside and in the post-mortem room: First, C. L. Hudson; second, A. F. Stace. Governor's prize, T. H. Williams. Exhibition in Anatomy, First year: W. G. Nash. Lyell medal: W. A. Furmston. Medicine: J. R. Roberts. Surgery: J. R. Roberts, T. H. Williams. Pathological Anatomy: J. R. Roberts. Practical Surgery: W. A. Furmston. Anatomy: H. Bartlett. Physiology: H. Bartlett. Chemistry: T. H. Clarke. Midwifery: W. A. Furmston. Forensic Medicine: W. A. Furmston. Materia Medica: W. B. Cockill. Practical Chemistry: W. H. Vickery. Botany: W. G. Nash. Practical Physiology: E. E. Lewis. Comparative Anatomy: H. Bartlett. Psychological Medicine: W. A. Furmston, T. H. Williams. Medical Society's Prizes: E. H. Freeland (paper), Bernard Lawson (pathology), Edgar Nicholson (histology), C. L. Hudson (debate). Entrance Scholarships—First: W. B. Cockill; second, W. G. Nash. Science Scholarship: L. P. Gibson.

CHARING-CROSS HOSPITAL SCHOOL OF MEDICINE.—Llewellyn Scholarship: Certificate and £25, L. J. Pisani. Golding Scholarship: Certificate and £15, J. S. W. Chitty. Governor's Clinical Gold Medal: F. O. Stedman. The Pereira Prize: Certificate and £3 prize, E. T. Gregory. Anatomy: Senior silver medal, W. J. Colborne; Junior bronze medal, V. Sapp. Physiology (silver medal): J. G. H. Carter. Practical Physiology (silver medal): E. Cooper. Chemistry (silver medal): L. E. Sexton. Practical Chemistry (silver medal): E. H. Lingwood. Medicine: Senior silver medal, G. H. Charlesworth; Junior silver medal, W. H. Compton. Surgery: Senior silver medal, F. O. Stedman; Junior silver medal, W. J. Colborne. Botany (silver medal): J. S. W. Chitty. Materia Medica (silver medal): W. H. Compton. Midwifery (silver medal): L. J. Pisani. Forensic Medicine (silver medal): A. E. Hardy. Pathology (silver medal): G. H. Charlesworth.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Asaph (Rural).—Dr. Lloyd Roberts reports a death-rate of 16·8 per 1000 for this district, and mortality amongst children under one year of age as low as 91·6 per 1000 births. Only a few isolated cases of infectious disease occurred, and the greatest want of many places in the district seems to be a proper water-supply. Some villages have, however, been so supplied, and other works tending to improve the conditions under which the people are living have been carried out.

Burgh of Dundee.—The death-rate of Dundee was high in 1883—namely, 23·9 per 1000. Dr. Anderson explains that of the large towns of Scotland Dundee stands fifth on the list, four having a lower and three a higher death-rate. This compares unfavourably with the large towns of England, for of the latter, twenty-two have a lower mortality than Dundee. The system of notification of infectious diseases is said to work most satisfactorily in every-way. Not only is there no friction, but from a medical point of view it has answered admirably, detecting the existence of infectious disease. It has also incidentally led to considerable improvements in the sanitary state of the drains, by revealing at an early date the conditions under which disease was being spread by them. Dundee possesses a hospital for infectious diseases, and the mortality amongst patients removed to it, as compared with that in those treated at home, shows a difference of nearly 6 per cent. in favour of hospital treatment. This is readily understood when we learn of the 108 deaths occurring in houses; forty-three took place in tenements containing six or nine inmates—that is to say, 40 per cent. of these infectious deaths occurred amongst those whose surroundings were most unfavourable to recovery. In Dundee it is illegal for any pupil to attend school if coming from an infected household, and it is also illegal for teachers to receive them, but the law as to this is hardly observed with sufficient stringency. Intimations as to infectious disease are, however, at once transmitted to school teachers by the sanitary department, and certificates as to freedom of infection &c. are also granted. Where the law is not observed, Dr. Anderson strongly urges that legal proceedings should be taken against offenders. Appended to the report is an important statement by the sanitary inspector, giving advice as to certain details of plumbing and other matters. But we hardly like what he says about connecting overflow pipes with soil pipes, for whilst on the one hand he explains that this should under no circumstances be done, he proceeds to say that when it is done a syphon trap and a wetting pipe, to keep the syphon full, are needed. Even if this should never fail, the system is absolutely faulty, and should never be tolerated where it can be done away with. He also advocates the trapping of rain-water pipes at the bottom, together with the addition of a ventilating pipe, so as to prevent foul air getting into attic windows. But in dry weather, unfortunately, the trap becomes unsealed. Rain-water pipes, if connected with a sewer, should be cut off at the bottom, and made to flow over a trapped gully out of doors, in the same way as waste-pipes.

Tendring (Rural).—Dr. J. W. Cook, in his annual report on this sanitary district, again draws attention to the need for providing Brightlingsea with proper drainage and sewerage. At Clacton-on-Sea a system of sewers is all but completed—indeed, it was hoped that before this season ended the system would be at work. Water supply still seems to be a difficulty in some localties, notably at Parkeston and in the village of Mistley; and at Great Oakley Hall an outbreak of typhoid fever was due to well-pollution at a dairy. The milk was sold in Harwich, and typoid fever was found to be prevailing in that town amongst the consumers of milk from the dairy in question. The sale of milk was at once stopped, the well was closed, and the disease ceased. Typhus is

reported as having occurred at Frating, and the disease is set down as due to the bad state of the drains and to a polluted well. There was probably some error of diagnosis here for such localities do not suffer from typhus except as the result of importation, and typhus cannot be regarded as having its cause in such sanitary circumstances as are specified. The death-rate of the district stands at 16·3 per 1000.

Wednesbury (*Urban*).—Mr. Garman reports the death-rate of this town as 19·9 per 1000. Scarlet fever became epidemic towards the end of 1883, and was very fatal. Diphtheria also prevailed concurrently with it. Thirteen scarlet fever and four diphtheria deaths were registered. The deaths from typhoid fever were 14 in number, and having regard to the good water-supply in the place, this number must be regarded as unnecessarily large in a population of 24,500. The midden system is stated to be under constant supervision, but in many similar localities this system, as carried out, is responsible for much typhoid and diarrhœa. In 1882 the typhoid fever deaths numbered eighteen. The report deals mainly with the prevalence of disease and with statistics, and it only incidentally refers to the sanitary circumstances of the district and the future improvements needed in it.

Barrow-in-Furness (*Urban*).—This urban district continues to grow steadily. In 1880 the population was estimated at 40,000; now the estimate is 52,000, and on this estimate the death-rate is a satisfactory one, reaching only 17·1 per 1,000. There has during the past few years been a sensible decrease in the number of infantile deaths, and the change is regarded by Mr. Settle as due to improvement both in the sanitary circumstances and also in the moral and social habits of the place. Day nurseries are, however, still needed. Enteric fever was somewhat widely prevalent in 1883, there having been 216 cases and 36 deaths, the causes being the escape of sewer air into houses and general dirtiness of houses amongst those affected. The sanitary hospital was useful during its prevalence, thirty-one cases being admitted. A list of sanitary works carried out shows that continuous improvement in regard to details is constantly in progress.

Hull (*Urban*).—With an estimated population of 176,296, the death-rate of this important borough was, during 1883, 22 5 per 1000, and the birth-rate 36·0. The infantile mortality, as measured by the proportion of deaths under one year to births, was high—namely, 183 per 1000. The zymotic death-rate was much lower than the average for the past ten years, reaching as it did 2·91 per 1000, diphtheria and whooping-cough alone being in excess of the rates for the previous year, when scarlet fever and diarrhœa were prevalent. Referring to the somewhat prevalent opinion that there is a certain relationship between scarlatina and diphtheria both in origin and pathology, Dr. Mason expresses the view that no such relationship exists, the diseases being distinct as regards origin, and differing materially in their pathological bearing. The genuine diphtheria which prevailed had, however, a definite relation to a group of seemingly simple sore-throats. The question of providing adequately for the isolation of infectious diseases in the port of Hull has engaged much attention, but as yet no determination has been arrived at. The current sanitary work of the district makes steady progress. Hull was early in the van of towns which promoted frequent collection of filth and refuse, and the work has never been more efficiently performed than it is now. A house-to-house inspection—one of the most important of sanitary duties—is in progress, and must materially tend to the removal of local conditions of ill-health; so also, such defects in connexion with the sewage and other matters as are detected have either been dealt with or are receiving attention.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

During the week ending the 13th inst., 5768 births and 3588 deaths were registered in twenty-eight of the largest English towns. The annual rate of mortality in these towns, which in the three preceding weeks had been 25·6, 25·3, and 24·1 per 1000, further declined last week to 21·4. During the first eleven weeks of the current quarter the death-rate in these towns averaged 23·3 per 1000, against 20·5 and 20·0 in the corresponding periods of 1882 and 1883. The lowest rates last week in these towns were 9·2 in Brighton, 15·2 in Plymouth, 15·5 in Derby, and 16·1 in Birkenhead. The rates ranged upwards in the other towns to 31·0 in Leicester, 32·0 in Wolverhampton, 32·4 in Cardiff, and 35·4 in Blackburn. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 1314, 1260, and 1147 in the three previous weeks, further declined last week to 802; these included 531 from diarrhœa, 71 from whooping-cough, 65 from scarlet fever, 46 from measles, 45 from "fever" (principally enteric), 31 from diphtheria, and 13 from small-pox. These diseases caused the lowest death-rates in Derby, Brighton, and Plymouth, and the highest in Hull, Blackburn, and Preston. Measles caused the highest proportional fatality in Preston and Halifax; scarlet fever in Leeds, Sheffield, and Cardiff; whooping-cough in Leeds and Birmingham; "fever" in Bolton and Norwich; and diarrhœa in Preston, Leicester, and Blackburn. The 31 deaths from diphtheria in the twenty-eight towns included 22 in London, 3 in Salford, 2 in Liverpool, and 2 in Leeds. Small-pox caused 9 deaths in London, 2 in Liverpool, 1 in Sheffield, and 1 in Hull. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which in the nine preceding weeks had declined from 1368 to 530, further fell to 477 on Saturday last; the new cases admitted were 66, against 53, 63, and 77 in the three previous weeks. The Highgate Small-pox Hospital contained 31 patients on Saturday last, 4 new cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which in the two preceding weeks had been 181 and 167, were last week to 170, and 12 below the average. The causes of 69, or only 1·9 per cent., of the 3588 deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Leicester, Nottingham, and in five smaller towns. The largest proportions of uncertified deaths were recorded in Halifax, Newcastle-upon-Tyne, and Birkenhead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which in the three preceding weeks had been 21·8, 20·8, and 20·5, rose to 21·5 during the week ending the 13th inst.; it almost corresponded with the mean rate during the same period in the twenty-eight large English towns. In the Scotch towns the rates last week ranged from 15·0 and 16·7 in Aberdeen and Edinburgh, to 24·7 in Glasgow, and 25·8 Leith. The 519 deaths in the Scotch towns included 55 which were referred to diarrhœal diseases, 21 to whooping-cough, 17 to scarlet fever, 15 to diphtheria, 10 to "fever," and not one either to small-pox or measles; in all, 118 deaths resulted from these principal zymotic diseases, against 121 and 127 in the two preceding weeks. These 118 deaths were equal to an annual rate of 4·9 per 1000, which slightly exceeded the average rate from the same diseases last week in the twenty-eight English towns. The deaths referred to diarrhœa, which had been 74, 68, and 55 in the three previous weeks, were again 55 last week, and exceeded by 10 the number in the corresponding week of last year; 27 occurred in Glasgow and 10 in Dundee. The 21 fatal cases of whooping-cough showed a slight further decline from recent weekly numbers, and included 10 in Glasgow, 3 in Dundee, and 3 in Aberdeen. Of the 17 deaths from scarlet fever 13 were returned in Glasgow and 2 in Edinburgh. The 15 fatal cases of diphtheria showed a further increase upon recent weekly numbers, and included 8 in Glasgow, 2 in Dundee, and 2 in Aberdeen. The 10 deaths from "fever" also showed an increase; 5 were returned in Glasgow, 3 in Paisley, and 2 in Edinburgh. The deaths referred to acute diseases of the respiratory organs in the eight Scotch towns showed a slight further increase upon the numbers in recent weeks, but were below those returned in the corresponding week of last year. The causes of 80, or more than 15 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had declined in the three preceeding weeks from 30·3 to 29·3 per 1000, was 29·4 in the week ending the 13th inst. During the first eleven weeks of the current quarter the death-rate in the city averaged 24·8 per 1000, the rate during the same period being 21·7 in London and 16·5 in Edinburgh. The 198 deaths in Dublin last week exceeded by 1 the number

in the preceding week, and included 42 which were referred to the principal zymotic diseases, against 65 and 42 in the two preceding weeks; of these, 24 resulted from diarrhœal diseases, 11 from scarlet fever, 4 from "fever," 2 from diphtheria, 1 from whooping-cough, and not one either from small-pox or measles. These 42 deaths were equal to an annual rate of 6·2 per 1000, the rate from the same diseases not exceeding 3·1 in London and 2·5 in Edinburgh. The fatal cases of diarrhœa, which had been 48 and 29 in the two previous weeks, further declined last week to 24. The deaths referred to scarlet fever, which had declined from 13 to 7 in the three preceding weeks, rose again to 11 last week. The 4 fatal cases of fever exceeded the number in any recent week. The fatality of whooping-cough showed a marked decline from that recorded in the three previous weeks. Three inquest cases and 1 death from violence were registered in the city during last week, and 47 deaths occurred in public institutions. The deaths of infants showed a considerable decline from recent weekly numbers, while those of elderly persons were more numerous. The causes of 38, or more than 19 per cent., of the deaths registered during the week were not certified.

Correspondence.

"Audi alteram partem."

THE ALLEGED CAUSE OF CHOLERA.

To the Editor of THE LANCET.

SIR,—There is no subject on which the same amount of labour and observation has been bestowed with so little real or apparent advance as that which forms the heading of this communication. It has fallen to my lot to have seen much of cholera, and it was my good fortune to have known intimately the late Dr. James Bryden, than whom a more truthful or philosophical-minded man did not exist. Strong lights are unnecessary, true ones being at command, says Selden; and it seems strange, where every fresh theory or hypothesis appears destined to add but another to the many scientific pitfalls for the footsteps of the unwary, that the works of a man who sedulously endeavoured to compile such a truthful record of facts that it might have been written, so to say, by cholera itself, and merely chronicled by him, should have received so little attention at the present time.

It is as easy as it is common to drop down with the tide of the latest popular view—the current doctrine of the day; but it unfortunately often happens that the facts are all going the opposite way.

As I propose briefly commenting on the latest view of a most accomplished and competent histologist, I desire to guard against being thought to possess any sympathy with the Philistinism of the day, which roughly ridicules what it cannot understand or appreciate. I quite appreciate and sympathise with the labours of such men as Koch and his *confrères*, but it must be remembered that it is truth, not victory, that has to be sought. It is humiliating to have to confess that we are still ignorant of the cause of cholera, for the latest alleged discovery of it is not, I fear, destined to prove a "true light."

Koch has, he says, found a bacillus of comma-like form in all cases of cholera, and in that disease alone. These bodies are met with in the small intestines, which are the seat of the disease; they swarm in the inodorous watery alkaline fluid which characterises a certain stage of that disease, being substitutionary apparently of those micro-organisms ordinarily found. These bacilli are easily destroyed by desiccation, by acids, even by so weak a one as that of the gastric juice, and so on. The outcome of his observations is that these micro-organisms are the cause, and not an effect or concomitant, of cholera. All attempts to impart the disease to the lower animals by inoculation have, however, failed.

Surely, several steps in the argument are assumed. For instance, is it the fact that the small intestine is the seat of the disease? In cholera the body is, as it were, dominated by a morbid influence, under which exosmosis is everything, endosmosis *nil*. There is in most cases an enormous transudation of alkaline serous fluid into the intestines during one stage (rice-water) of the disease; but that does not justify us in stating as a logical inference that the small intestine is the seat of the disease, any more than we should be justified in saying that the doors of a theatre in case of a panic from an alarm of fire were the seat of the disaster in the theatre.

Next (*a*) it must be shown without any shadow of doubt that these comma-like bacilli are absent in every other disease, and in healthy individuals under ordinary circumstances; and for this purpose the number of observations recorded by Koch to establish it are, to my mind, insufficient. (*b*) Further, it must be shown that the bacillus is a specific object, and not a mere differentiation from some common microbe, owing to the nature of the menstruum in which these latter float, and on which they are presumably nourished.

Although it may be true that, in regard to shape, bacteria are very constant and one kind is not changed into another, experiments are required to prove what would be the effect of subjecting the micro-parasites ordinarily present in the body to contact with a mucous membrane and an alkaline fluid like that found in cholera intestines. Why does a pancreatic digestive mixture soon swarm with bacteria when the natural juice or an infusion of the gland is used. (Foster's "Physiology," pp. 253–298). It is difficult to understand how the intestines can be the sole breeding-ground or infecting depôt, so to say, of these bacilli, which are to produce all the morbid phenomena witnessed in cholera. Koch has not detected these comma bacilli in the blood, liver, spleen, or kidneys. Again, take the effects of desiccation, and how are we to explain the survival of this bacillus in the plains of India? If the gastric juice of a healthy stomach has sufficient acidity to destroy the bacillus, it should follow that the stomach is the safest place to put it. Koch has apparently to evoke the aid of some trifling indigestion or gastric derangement on the part of those attacked; but is not this an assumption, and, at least as far as some cases are concerned, opposed to experience? Does he hold, as he seems to do, that the cholera cause can only reach the system through the gastro-intestinal tract? On what evidence?

How does cholera, as a matter of fact, comport itself in India? This cholera bacillus must be capable of covering the two extremes of (*a*) sporadic cases, where one man is attacked and dies in a place, no other cases occurring, and (*b*) an epidemic extending over half the globe. A return of the cholera cases in Bengal for this year, or for any year, would show that isolated cases at numerous stations, widely separated from one another, are common phenomena; and further, these so-called sporadic cases at certain seasons are often the precursors of epidemics later on. How are we to account, on the one hand, for the apparently spontaneous origin of this cholera bacillus at one time and place, and for its limited sphere of action; and, on the other, for its enormous and rapid development when the disease is spreading as an epidemic?

The regularity of the course of epidemic cholera in Bengal—its relation to time and space—could be easily illustrated. Why is it, in the first year of its advance to the north-west, so often limited by the line of 80° E. long.? It has been lately discovered that at this longitude the two monsoon currents from the Bay of Bengal and Arabian Gulf meet, and must there give rise to an ascential current. It would be easy to illustrate this and other circumstances connected with the past history of epidemic cholera in Bengal by some striking tables embodying the results of repeated observation; and they cannot surely be mere coincidences.

Again, how are we to explain the almost simultaneous outbreak of cholera at so many and distant stations? How are we to explain the contrast exhibited by Peshawar as compared with other places in regard to epidemic cholera? In Peshawar a cholera epidemic will continue till December; in other places, say the Punjab, it is over as an epidemic by the end of September. A great deal has been said from time to time about the influence of water as the vehicle of a *specific*, as contra-distinguished from a *common*, cause of impurity. In the celebrated Broad-street pump case the outbreak was almost identical in its course and duration with a typical outbreak in a regiment on the march in India; and the fact of the fatal cases ceasing at once after closure of the well is against that having been the cause.

The course of an epidemic of cholera in Bengal, instead

of being with is against the course of the natural drainage of the country. Of course it is no new thing that cholera hugs the banks of a stream; but it has never happened that an epidemic of cholera commenced in the Himalayas or Upper Provinces and spread gradually down the Ganges, Jumna, or Indus; its advance has been exactly opposite.

Professor Koch, misled no doubt by incorrect information, has attributed the improvement in the health of the garrison at Fort William, Calcutta, to the introduction of a pure water-supply; but the fact is that an Order in Council exists refusing to sanction the necessary expenditure for its introduction, in consequence of the remarkably good health which the Fort William garrison had then been enjoying for several years past. The town water was subsequently introduced; but there was no such causal connexion between the two things as has been alleged. There are, moreover, some facts within my knowledge connected with the prevalence of cholera on board some of the Assam steamers, and the town and district of Dacca, which would indicate how cautious we should be before considering that cholera infection through a specifically contaminated water is a demonstrated fact.

This communication has already extended to a wearisome length, therefore I will finish what I have to say next week if you will kindly grant me the necessary space.

I am, Sir, yours obediently,

J. A. MARSTON,

September, 1884. Deputy-Surgeon General, A.M.D.

"THE METAPHYSICS OF COMTE."

To the Editor of THE LANCET.

SIR,—The tone of Mr. FitzPatrick's letter makes me fear that I did wrong in using the not very elegant term "rubbishy" to qualify metaphysics. But the context would show that the worthlessness of rubbish was ascribed by me to metaphysics in general, and not only to the mystical latest phases of Comte, which are at least as like metaphysics as one fog is like another.

I certainly did not mean to speak slightingly of Comtists, and am very sorry if I seemed to do so. No mere passer-by would cast a reflection ever so remote and momentary upon the distinguished group of men known as Comtists, or Positivists. Even a wayfaring man must be moved by the aspect of a somewhat forlorn group worshipping Humanity in the cold shade of public neglect. Nay, it is even quite touching to witness their almost simple disregard of that reciprocity which more numerous and ordinary worshippers commonly have an eye to.

The Comtists made science into what they call philosophy, and philosophy into what they call religion, and having done so they worship. They worship humanity, the source of their undivine religion and science. Very few people join in the worship; and it is curious to me that the Comtists do not see why this is. They do not appear in the least to appreciate the greatest and first of truths which is at the foundation of all religion—the truth, namely, that there must be a reciprocity between worshipper and worshipped. The reciprocity is, indeed, necessarily a close one. Even Pagans have seen this greatest of truths. Cicero clearly perceived it. He remarks that the deity of elephants would have a proboscis. But the correspondence of worshipper and worshipped may be ground too sacred to admit of playful treatment. Nevertheless, I may remark how the intensely personal Jew worshipped a correspondingly personal God. Intense individuality required uncompromising monotheism. The Jew has never been able to accept Christ's simple summary of the Commandments. The intensely personified God who reciprocated to the intense ego of the Jew was even supposed by the Jew to grow jealous about him. But Humanity will never grow jealous about the Comtists, however their clever high priest, Mr. Frederick Harrison, may flirt with the Unknowable quite openly before the very eyes of Humanity in the *Nineteenth Century* and *The Times*. The weakness of the Comtists' philosophy-religion, which is neither religion nor philosophy, but which at any rate worships Humanity, is that there will never be any reciprocity of worshipper and worshipped. I must leave it to Mr. Harrison and to Mr. Spencer to settle for Mr. FitzPatrick whether Comtism includes the whole Spencerian system, metaphysics and all. It is plain to anyone reading Mr. Harrison's letter in *The Times* of this week that Positivists do not see themselves quite as others see them. One cannot be surprised. The "giftie" of seeing ourselves as others see us would belong rather to Relativists than Positivists. But Mr. FitzPatrick has been acquainted with the distinguished group of Comte's followers, and he must be aware that the "latest phases" of Comte became mystical and obscure, and left the safe ground of five-sense science, and undertook to deal objectively with the subjective aspect of life, and that in this departure he was not followed by all his followers, small as the distinguished group has always been. Was not Littré rather than Comte the Paul of the Positive system? And is not Mr. Frederick Harrison now a kind of melodramatic Athanasius, declaring the Positive polity with its human subjective synthetic side to be ὁμοούσιον with the awful primitive abstractions of Positive Science. One, indeed, can easily foresee fundamental divisions amongst the Comtists. But such divisions will never reach great dimensions through the numbers involved. To be a Positivist your brain must preponderate over your heart—a result obtainable either through much brain or little heart; and either of these alternatives will disqualify you for a wide religious success amongst the multitudes who compose humanity. Mr. Frederick Harrison has evidently much brain. The little Comtists whose qualification for the Positive philosophy consists in little heart are in even a more hopeless case than Mr. Harrison as to the prospect of attracting the attention of their divinity.

I am, Sir, yours truly,

Finsbury-circus, E.C., Sept. 15th, 1884. W. MOXON.

CONGENITAL SACRAL TUMOUR: A CORRECTION FOR THE "SYSTEM OF SURGERY."

To the Editor of THE LANCET.

SIR,—My attention has been called by Mr. Charles Hawkins to an unaccountable error in an article of mine in the "System of Surgery." May I ask you to allow me space to make the necessary correction? The passage is in vol. iii., p. 781, of the new (third) edition, in the article on Surgical Diseases of Childhood. Speaking of "congenital sacral tumour," and of the danger of operations on such tumours, I say, "This remark is illustrated by a preparation in St. George's Hospital Museum consisting of a number of irregular pieces of bone from a congenital tumour removed by Sir B. Brodie from the sacral region. The operation proved fatal." I cannot explain how such a misrepresentation could have crept into my work, since I had previously, in my book on "Surgical Diseases of Children" (second edition, p. 20) quoted from Mr. Hawkins's paper in the Path. Soc. Trans., vol. iii., p. 447, the following account of the real history of the case in Sir B. Brodie's words:—"Contrary to my advice, a surgeon made an incision into the tumour, which not only served no useful purpose, but left him in a worse state than he was before. Different cysts suppurated, discharging pus and adhesive fluid. Sometimes a collection of fluid and pus pressed on the rectum, occasioning a difficulty of expulsion of fæces, and then discharging its contents into the bowel. After this he was always in a state of greater or less suffering. He lost flesh, had occasional attacks of fever, and at last he sank and died." Thus my statement is erroneous in three particulars. 1. Sir B. Brodie far from having removed the tumour always advised the patient strongly to permit no interference with it. 2. The tumour was never really removed; the "other surgeon" only made an incision into it, when it was inflamed in consequence of the patient having fallen on it. 3. The pieces of bone in the preparation were removed, not during life, but by Mr. Hawkins in post-mortem examination.

I have thought it desirable to correct the error, which indeed ought never to have got into the text, or ought to have been corrected in the second edition of the System. The main conclusion, however, which I attempt to enforce in the article is unaffected by my blunder—viz., that such tumours should only be operated on when the surgeon believes that he can extirpate the whole tumour, and even then not without an adequate motive, since the operation is always a very formidable one. I am, Sir, yours truly,

Great Cumberland-place, Sept. 11th, 1884. T. HOLMES.

THE EXAMINATION OF SURGEONS-MAJOR.

To the Editor of THE LANCET.

SIR,—Pressure of business has prevented my ere this asking you the favour of a space in your valuable journal for the few following remarks, in addition to the many already expressed, upon the subject of submitting surgeons-major in the army over twenty years' service to a qualifying examination for promotion to the rank of brigade-surgeon (*vide* Army Circular, August 1st, 1884). The inadvisability of any examination for officers of such seniority appears to me apparent, having regard both to the prestige of the service and to the *amour propre* of the profession. This presumably is a military question, for which some imaginary precedent may supply the apology. Not even so much excuse or extenuation can be claimed for paragraph 9, by which I see it is intended that these elderly victims are literally, in more senses than one, to be put through their A B C, as I notice alphabetical clauses through two-thirds of the alphabet, terminating at letter O, which forms the culminating point of the whole absurdity. See paragraph 9, clause O: "Questions on operative surgery and practical medicine will also form part of this examination." But one parallel could be found for examining in such subjects professional men of a quarter of a century's seniority—viz., to subject all lieutenant-colonels in the army to an examination in the goose-step as a qualifying test of their fitness for promotion to the rank of colonel. Indeed, my allusion to the manners and customs of the feathered tribe appears suggestively applicable in tracing the present steps taken by the originators of this circular. This does not explain, however, the unaccountable deviation on the Director-General's part from the high order of intellect and capacity with which he has hitherto distinguished his present position, and if, contrary to his convictions, he has allowed himself to be influenced, the fact is only the more deplorable. The assignable object of these innovations is a desire to prove the efficiency of the department; but why delay that demonstration for twenty years? Were an examination necessary for such a purpose, its utility would be more marked at the commencement of an officer's career than towards its close. If a man has been efficient during twenty years' service, there is but scant necessity for proving the fact at the end of that term; and if he has hitherto been incompetent, it is late to remedy the evil. By all means subject officers to a rigid and most searching examination upon the widest range of professional subjects, between the ranks of surgeons and surgeons-major. From that much benefit would most probably accrue. But an officer practising for over twenty years is as unlikely to profit in the smallest degree from an examination as he is certain to be embittered against a service which could subject him to so unnecessary an indignity.

By paragraph 11 we are informed as to the nature and means of this inquisitorial revival. "It is to be in part by printed papers and in part *viva voce*. The Board will enter so far into the subject-matter of each head selected for *viva voce* examination as to show that the officer's knowledge has been fully tested." By all means. Only primarily let the Board's knowledge "be fully tested" as to its capability of pronouncing upon the practice and experience of officers who quite probably are as worthy of confidence as would be the opinion of those exalted personages forming the Board. By paragraph 12 I see this Board is "carefully to record all questions asked and answers received, and to send the record to the Director-General." But such a record must materially improve or deteriorate in merit according to the capacity and reliability of the source through which it is transmitted. To conclude: The papers will then be submitted to another Board, likewise of experienced officers, who in their turn are to pronounce upon the competence of the officer. For the second time the colouring given to that officer's proficiency would be deeply tinged by the prevailing hues of the Board's capability for transmitting the treble-distilled matter originally received from the unfortunate victim. He consequently must be largely dependent, not upon his own brains, but upon what could not obviously be a certain maximum quantity of that commodity in the possession of those relays of experienced individuals, always apparently unquestionable in their description. One naturally wonders who are to form this all-important tribunal. First, if civilians, an inevitable slur is cast upon the proficiency of the department. Secondly, if men in the same service, how can it be ascertained that they know more about the subject than those they are pronouncing upon? Thirdly, will the presiding genii be called from amongst those fortunate mushrooms who spring suddenly to the surface and into office, having been grown in the forcing soil of an effete favouritism? Then, indeed, the whole injustice is not left without a coping-stone. But, as though there were any apprehension that the entire fiasco might not be rendered quite complete, we are informed that "the examination will be optional." Is it to be inferred from this that there is a lurking suspicion in the minds of the authorities that the veteran doctor would prefer bringing his grey hairs in sorrow, as a surgeon-major, to the grave, rather than face the alternative of being turned into a metaphorical shuttlecock, to be battledored from Board to Board, and from the A B C to the Omega of his profession? A very heartfelt sympathy with, and interest in, the department, gathered from personal experience in the services, must be my apology to you for so inconsiderately trespassing on your space.

I am, Sir, your obedient servant,

W. I. WHEELER, F.R.C.S.,
Ex-President of the Royal College of Surgeons, Ireland.

Dublin, Sept. 16th, 1884.

THE CHOLERA.

To the Editor of THE LANCET.

SIR,—The continued spread of cholera on the Continent makes it imperative on the part of medical officers to take extra precautionary measures to prevent its outbreak in this country, and especially in London. When cholera first appeared in France, the metropolitan authorities freely used disinfectants to street gullies and gratings, so that poisonous gases from putrefying matter were in a measure destroyed. It is not only gratings, gullies, dustbins, urinals, and receptacles for dust that require special attention at this time of the year, but the greatest danger exists in the branch drains leading from buildings to sewers in the streets. These are to some extent not under the control of vestries, and the inlets into sewers are often closed, and from these gases of the most poisonous nature are produced. In these branch drains disinfectants should be freely employed during the next two months. I am aware that many of the medical profession treat very lightly the theory that gases from putrefying matter are the principal agents in generating and transmitting zymotic disease; but to those who have investigated the question, it is not one of theory, but of fact. Previous to the cholera outbreak on the Continent, small-pox was very prevalent in London, but the free use of disinfectants as a preventive against cholera had the effect of stopping the small-pox epidemic.

I am, Sir, yours faithfully,

R. H. REEVES.

September, 1884.

LORD TENNYSON AND THE SURGEON.

To the Editor of THE LANCET.

SIR,—Even professing Christians are liable to imagine one another to be monsters of iniquity, and this is due to ignorance, for when placed on the same platform in some effort to benefit humanity, they learn to esteem one another. Probably Lord Tennyson is ignorant of doctors and their work, while Dr. Moxon may be ignorant of the incessant charitable visits of the Poet Laureate to his poor neighbours. It may be that Lord Tennyson was accustomed to distribute tracts in some village hospital, and met with a surgeon whose time did not allow him to pay sufficient, or, at least, desired, attention to the distinguished visitor. We ought never to judge hastily, and while surgeons may be doing everything in their power to relieve and cure their patients and deserve all honour for their sympathy and kindness, they must respect and honour the man who throws open his garden to the waifs of the street and at his own expense takes a crowd of little convalescents or street Arabs from the slums of London to indulge them with games and regale them with fruit on his own lawn, while he instructs them by reciting pieces of poetry and reading Gospel stories to them. I do not know anything of Lord Tennyson's deeds of charity, but no doubt his biographer will relate them. It is possible,

though improbable, that an intelligent man, full of sympathy and kindness for the poor and the afflicted, may be unable to appreciate the work done in hospitals, and may busy himself in establishing homes for the destitute and suffering that may be entirely under his own control. If both Dr. Moxon and Lord Tennyson are spending their lives in relieving the suffering and bringing joy to the mourner, a more intimate acquaintance will no doubt make them love one another.

I am, Sir, yours, &c.,

Sept. 1884. S. B. G. MCKINNEY, L.R.C.P. Edin.

BRITISH MEDICAL BENEVOLENT FUND.

To the Editor of THE LANCET.

SIR,—The late Sir Erasmus Wilson has munificently left the British Medical Benevolent Fund £5000, but as Lady Wilson takes a life interest in the whole of his property, this legacy of course is not payable until after her death.

I take this opportunity of bringing before the profession our urgent need of funds, for we are totally unable at the present time to help many of the deserving cases that come before us.

Subscriptions may be paid to the Treasurer, Dr. Broadbent, 34, Seymour-street, Portman-square, or to

Your obedient servant,

GEORGE P. FIELD,
Hon. Financial Secretary.

31, Lower Seymour-street, Portman-square, Sept. 10th, 1884.

"ORGANISMS IN CHOLERA STOOLS."

To the Editor of THE LANCET.

SIR,—Adverting to my letter and drawing of a fortnight back, I desire to add that the organism in question may flourish abundantly in dejecta possessing a distinctly acid reaction. It can hardly, therefore, represent the specific bacillus of Dr. Koch, however closely corrresponding in respect to descriptions of the latter as yet published. Most observers would, I think, agree in referring my figures to those of a vibrio, admitting (what I find now doubted)[1] the validity of this particular form of bacterium.

I am, Sir, your obedient servant,

Bombay, August 19th, 1884. H. V. CARTER.

NEWCASTLE-ON-TYNE.

(*From our own Correspondent.*)

TYPHOID ON BOARD-SHIP FROM IMPURE WATER.

AT a meeting of the Sanitary Committee of the Middlesborough Corporation last week, the medical officer, Dr. Malcomson, reported the arrival of a Norwegian vessel, named the *Tress*, with typhoid fever on board. There were two cases, and one of the men had died. This case was a very bad one, and one or two of those who attended on the patients caught the infection. The ship had been disinfected, and an analysis of the water showed that it was little better than sewage, and had occasioned the outbreak. It was resolved to forward a copy of the medical officer's report to the Board of Trade, in order that captains of ships at Stettin may be warned against taking in a supply of water at that place for drinking purposes.

CHOLERA PRECAUTIONS ON THE TYNE.

Professor de Chaumont, medical officer to Her Majesty's Privy Council, has been visiting the Tyne with a view to ascertain what precautions have been taken to guard against the introduction of cholera into the port. As well as visiting the floating hospital at Jarrow, he has inspected the small-pox hospital on our Town Moor, the convalescent hospital for fever and small-pox at Byker, the fever hospital, &c., and he was shown the plans &c., for the proposed new and extensive hospital at Heaton for infectious diseases. He was supplied with details by our city authorities of the provision made by them for combating any infectious disease that may from time to time become epidemic. Professor de Chaumont, on leaving Newcastle, made a similar inspection of the neighbouring port of Blyth.

[1] Vide Mr. W. B. Grove's useful Synopsis, recently published by Chatto and Windus.

SANITARY MATTERS AT DURHAM.

In a previous letter, last June, I mentioned that the Corporation of Durham City had, in consequence of the remonstrance of their medical officer of health, agreed to provide a hospital for infectious diseases, and went so far as to select a site. The other day one of their aldermen actually succeeded in inducing the Corporation to rescind the resolution, notwithstanding that it is admitted, and notorious, that a greater necessity exists now than when the proposition was mooted and carried. It may be explained that the Corporation sits as the Urban Sanitary Authority, and that their opposition to their own scheme was based on the "needless expense" foundation, or, in other words, "the penny-wise and pound-foolish" system of economy. One of their own newspapers speaks of the procedure on the part of the Corporation as "the by no means uncommon exploit of advancing one step backwards." As a commentary on the strange proceedings of the Corporation, Dr. Barron, their medical officer of health has notified an outbreak of small-pox in the city, the district of Framwellgate having no less than fifteen cases. The Durham guardians have determined to give liberal out-door relief to all small-pox cases requiring it, in order to isolate the disease as much as possible and to keep it away from the workhouse; but probably the Local Government Board may have something to say about the absence of proper hospital accommodation for infectious cases in the city of Durham.

DEATH OF MR. JOHN PRATT, M.R.C.S.

The death of Mr. John Pratt, M.R.C.S., is announced. He was for many years in active practice in the city of Durham, and a few years since he received a public and valuable testimonial in recognition of his labours during the severe small-pox epidemic in Durham in 1872, when he attended over 700 cases. He was distinguished by his kindness to his poorer patients. Mr. Pratt entertained peculiar views in reference to the subject of vaccination.

Newcastle-on-Tyne, Sept. 16th.

GLASGOW.

(*From our own Correspondent.*)

SMALL-POX AND DIARRHŒA.

IN the health officer's report for the fortnight ending 30th August two important points are noted—a sudden increase in the death-rate from diarrhœa in the very young, and the disappearance of small-pox from our midst. With regard to the first, it is ascribed to the recent sultry weather, ending in a very severe electric storm. No fresh cases of small-pox had been discovered in the city for a month; "and as the last patient had been dismissed from the small-pox hospital on 23rd August, the city is now entirely free of that disease, and when it reappears it must be by importation from without." This result, one on which the citizens of Glasgow are to be sincerely congratulated, may very justly be said to be due to the untiring efforts of Dr. J. B. Russell and his energetic staff of sanitary officers, to check the epidemic.

OUTBREAK OF TYPHOID FEVER.

Another outbreak of typhoid fever, affecting chiefly the inmates and officials of our two infirmaries and the fever hospital, is at present under investigation. In the Royal Infirmary no fewer than thirty cases have occurred, three of the officials being among the number. At the Belvidere Fever Hospital one of the Royal Infirmary nurses has died from the disease. It is believed that the epidemic is in some way connected with the milk-supply; whether this is the case will doubtless be made clear in Dr. Russell's forthcoming report on the outbreak.

THE DRAINAGE SYSTEM OF NEW BUILDINGS.

At a recent meeting of the Dean of Guild Court, in Glasgow, the Lord Dean of Guild (Mr. William McEwen) made the very sensible statement that, in his opinion, much advantage would be derived from the appointment of an officer whose duty it would be to survey the drains of new buildings and report on their sufficiency. Much good might be anticipated to flow from such an appointment. If the Court sanctioned the erection of buildings only on the under-

standing that the drains should pass the officer's inspection, and should refuse a licenie for occupation till such officer's recommendation had been complied with, the present disgraceful state of our house-drainage system would soon be set right, so far as new erections are concerned. This is a matter which very closely touches the public health, and it is to be hoped that Mr. McEwen's suggestion will not be lost sight of.

IRELAND.

(From our own Correspondent.)

MEDICAL OFFICERS' SUPERANNUATION ACT.

DURING 1883 there were 83 Poor-law medical officers in Ireland receiving superannuation allowances. Of this number 61 were dispensary medical officers, 14 medical officers of workhouses, and in eight instances the medical gentlemen held both these appointments.

RICHMOND HOSPITAL, DUBLIN.

The whole nursing system in this institution has been pointed out by the Medical Board as very defective. There is no one to give the nurses instruction or to overlook their duties. The matron visits the wards during the day, but as she has to superintend three hospitals, it is impossible that she can see that the individual requirements of the patients are attended to. The Medical Board some time since suggested the appointment of a skilled lady nurse as superintendent, and it is satisfactory to find that the governors have at last consented to the arrangement, and that a meeting will be held on the 25th inst., in accordance with a notice given by Professor Stokes, when the salary and emoluments of a trained head nurse for the hospital will be considered.

OPENING OF BERKELY HALL, QUEEN'S COLLEGE, CORK.

Berkely Hall, which has been erected at a cost of some £9000, for the accommodation of Protestant students attending this college, was formally opened last week by the Lord Bishop of Cork. Part of the cost was obtained on loan from the Board of Works, and among the contributors was Mr. Crawford, who gave £2500, leaving a debt remaining of upwards of £2000. The building, which contains forty bedrooms and grounds attached for the use of the students, has principally been erected owing to the exertions of the Dean of Residence, the Rev. Dr. Webster.

CORONERS AND MEDICAL WITNESSES.

A person recently died at the Hammam Baths, Dublin, and a medical gentleman being sent for found that life was extinct. The gentleman in question, Dr. McVeagh, very naturally expected that as he first saw the case, he would be the proper person to give evidence at the inquest, more especially as his name and address were taken by the constables in charge for that purpose. Another medical practitioner was, however, examined by the coroner, who was not sent for at the time of the man's death; and Dr. McVeagh complains, and with reason, of the want of courtesy and justice adopted by the coroner in this case towards the profession and himself.

Dr. Cameron, medical officer of health for Dublin, in his report for August states that the death-rate was unusually high, owing to the great mortality caused by diarrhœa, due to a considerable extent to the high temperature which prevailed.

The Dublin Corporation has arranged to add swimming baths to the baths and washhouses now being erected in that city.

The late Mr. James Gorman of Dublin has left £1000 to Jervis-street Hospital, £6000 to the Cabra Deaf and Dumb Institution, and £400 to the Mater Misericordiæ Hospital.

Dr. Fleetwood Churchill of Dublin died very suddenly from cardiac disease on the 6th inst.. The deceased was highly esteemed and respected, and his untimely death is deeply regretted by a very large circle of friends and acquaintances.

Dublin, Sept. 15th.

VACCINATION GRANT.—Dr. Richards, of Birmingham, has, for the second time, received a Government grant for successful vaccination in the Edgbaston district of the King's Norton Union.

PARIS.

(From our own Correspondent.)

THE CHOLERA EPIDEMIC.

I HAVE nothing new to report in regard to the progress of the cholera in the south of France, and although it is still raging, it is doing so with diminished intensity, and is confined to the localities already named. Even in Spain the situation is about the same, but in Italy the epidemic is assuming alarming proportions, particularly in Naples, where, however, the mortality and the number of admissions have been somewhat on the decrease during the last two or three days. The incursion of the epidemic into these parts would seem to point to the futility of quarantines and "cordons sanitaires" so zealously carried out by the Italian Government.

Two cases were reported to have occurred in Paris, but, as usual, were found on inquiry to be nothing more than severe cases of seasonal diarrhœa, which, however, proved fatal. The deaths having occurred in a hospital, the same precautions were taken as are now prescribed for genuine Asiatic cholera.

Paris has not for a long time been so healthy as it is at present, and although the mortality is rather higher than that of the preceding week (985 against 932), it is about the average of the corresponding periods of the five previous years.

THE DISINFECTION OF ROOMS.

At the requisition of the Prefect of Police, MM Dujardin Beaumetz, Pasteur, and Roux performed experiments with the view of ascertaining what would be the best gas for disinfecting rooms in which patients suffering from contagious affections had sojourned. These gentlemen have come to the conclusion that sulphurous acid gas would be the most efficacious for such purposes; but instead of simply burning sulphur as is done in the barracks and military hospitals, they recommend the burning of the sulphur of carbon as being the least expensive and the least injurious to the furniture or articles of metal in the rooms.

A MONUMENT TO FRESNEL.

A rather interesting ceremony was performed last Sunday at Broglie (Eure) in the inauguration of a monument that has been erected in honour of Augustin Jean Fresnel, the illustrious physicist and member of the Institute, where he was born on the 10th May, 1778, and who died at Ville d'Avray, near St. Cloud, in 1827. The ceremony was presided over by the Duc de Broglie as Maire of the district, and was attended by the Municipal Council of the place, and delegates from the Academy of Sciences. Fresnel was the author of several important works on the phenomena of the dispersion, refraction, and polarisation of light, which led to the invention of "Phares à lentilles à échelons," or lighthouses with gradation lenses, which have rendered such material service to navigation.

Paris, Sept. 17th.

ITALY.

(From our own Correspondent.)

"*Sempre avanti, Savoia!*" (Ever forward, Savoy!)—the now historical exclamation of Queen Margherita when, on the eve of the royal visit to Sicily, the commandant of the *Duilio*, hesitating to put out into the stormy sea, took Her Majesty's opinion on the point—seems no less the watchword of King Humbert. When besought by his retinue of statesmen, soldiers, and physicians to pause in his pilgrimage through cholera-stricken Naples, he simply bows and continues his progress from bedside to bedside and from ward to ward. Before starting for the doomed city he received from the town council of Pordenone a memorial to honour with his presence the races about to come off in that Venetian town; and his reply, sent by telegram, has such a truly Roman ring that I cannot forbear quoting it in the original, if but to show how modern Italian, equally with ancient Latin, condenses into force and crystallises into epigram—"A Pordenone si fa festa; a Napoli si muore. Vado a Napoli." (At Pordenone they are merry-making; at Naples they are dying. I go to Naples.) And he was as

good as his word, though the danger to be encountered was as great as when he faced the Austrian fire at Custozza, or as when his father, while also a youth, had his hussar jacket riddled with seventeen bullets at Novara.

Courage is the requisite the Neapolitans are most in need of, and had they possessed but a fiftieth part of it as it lives and moves in the King, their mortality due to cholera would have been lessened in the same ratio. Of this none are more cognisant than the Italian physicians, two of whom, Dr. Paolo Mantegazza and Dr. Angelo Mosso, have written classical treatises on "La Paura [fear]; and its Influence in courting and aggravating Disease." The truth is that in sudden explosions of epidemic maladies the Southern are no better than the Northern races when the cry of "fire" has been raised in a theatre and the audience *en masse* makes for the door. Seventeen years ago the town of Albano, perched on the hills some fourteen miles from Rome, was the scene of a panic disastrous in the same proportion with that now decimating Naples. Rome had just been visited with cholera, and a few sporadic cases sent crowds of the inhabitants to the Alban Hills. One fugitive, who had certainly the germ of the disease in him before his flight, took refuge in the Cappuccini monastery just above Albano itself, and in twenty-four hours he died. The Capuchins, in their wisdom, interred his body wrapped in its cholera-stained garments at a spot within a few feet of the one well which supplied Albano with water! The consequences may be imagined. In two days the mortality in a population not numbering 7000 rose to hundreds. First one churchyard was filled, and then another had to be opened. The demon of terror seemed to have possessed the inhabitants. All fled who had the opportunity—ecclesiastics (with one or two honourable exceptions), shopkeepers, even the apothecary. The one physician who remained had more to do in exorcising fear than in any other treatment, and case after case came under his observation which (I quote his words) "died of sheer panic." Before the week was out there was no escaping from Albano, as the townsfolk of Castel Gandolfo on the one side, and those of Ariccia on the other, planted artillery at every point of egress and forced the Albanese to simmer in their own juice. The patrician Cardinal Altieri was among those who died at his post, which was immediately filled by another Monsignore. A powerful description of the scene presented by the usually slumberous Alban town during the August of 1867 was contributed by the late Mrs. Robert Macpherson to *Blackwood's Magazine* of the same year.

It must also be remembered that liability to panic in presence of a mysterious danger like that of cholera is intimately dependent on bodily well-being, as no one who has any knowledge of the *modus vivendi* in Southern Italy can fail to see. The population have no physical stamina, no moral resisting power. They sleep in overcrowded rooms—rabbit hutches rather. They are very ill-clad, in winter especially, flannel being well nigh unknown among them, while a clean skin means a cold skin, and the ablutions required by health are neglected accordingly. Then, their food is the least sustaining imaginable, nine-tenths of it being macaroni—that is, starch and water with a little lettuce or an olive doing duty as salad. Butcher's meat or aliments of any kind containing the proper proportion of nitrogen they seldom taste. In summer they consume large quantities of fruit, invariably unripe, as the produce of orchards is never allowed to ripen, lest it be stolen or annihilated by hailstorms. Their poverty is such that they can barely afford fuel enough to cook their macaroni, which is generally eaten half raw and conveyed to their mouths with their fingers from unutterably filthy tables unfurnished with plates or forks. In point of education or moral enlightenment they are pretty much as they have been for centuries back—ignorant, superstitious, at the mercy of every quack, medical, religious, or political. Such is the population which on every occasion of a cholera epidemic furnishes victims by the thousand, particularly in cities like Naples, where the water-supply has long been execrable, and where twenty-five years of constitutional freedom and parliamentary representation have not sufficed to bring back even the semblance of the magnificent reservoirs, aqueducts, and fountains of ancient Rome, republican or imperial.

Special treatment in cases of cholera is still undetermined in Italy. That which has proved most successful has been the hypodermic injection of water saturated with chloride of sodium—hypodermoclysis, as the Italian physicians call it (ὑπό, under; δέρμα, skin; and κλύζω, lave). This is simply an extension of Pacini's recommendation, practised also by Duchaussoy in Paris, and fully described in the "Report on the Results of the different Methods of Treatment pursued in Epidemic Cholera, addressed to the President of the General Board of Health," p. 13 (London, 1855). Pacini says:—"It is clear that the injection of salt water into the veins produces immediate reaction, but it is easy to see that the said reaction cannot be maintained so long as the intestinal transudation lasts. Everyone will admit that the primary cure for a leaking wine barrel is not to keep filling it, but to make it tight; all the more is this the case in the human subject, where the vascular system has the power of refilling itself the moment the overflow ceases. So long as the patient is capable of swallowing astringent and antiseptic drinks, I do not believe the physician is authorised to practise those injections, since, besides being attended with risks, they are not absolutely required until the stage of apparent death, at least, in bodies presumed to be dead which present some return of warmth or some movement. The use of astringent and antiseptic beverages may be reverted to when reanimation manifests itself." Acting on these indications, Professors Perli, Amoroso, and Adinolfi, when in consultation one evening on a case of cholera collapse, practised hypodermoclysis according to Cantani's method. The operation itself was performed by Professors Perli and Adinolfi. In fifteen minutes the patient had absorbed a litre of water, and it was observed by the other physician present, as well as by a non-professional bystander, that the pulse became perceptible, the countenance, previously cadaverous in colour and feature, assumed something of animation, the anuria ceased, and a general improvement set in. During the night the amelioration was more and more pronounced, until the temperature touched fever point and the reaction commenced. The next morning the patient, though very weak, was comparatively well. Some interesting records of hypodermoclysis may be looked for from Naples.

Rome, Sept. 15th, 1884.

Obituary.

JOHN NETTEN RADCLIFFE.

WE deeply regret to have to announce the death after a long illness of this well-known member of the profession. Mr. Radcliffe was born in Yorkshire, and received his medical education at the Leeds School of Medicine, of which he was in later years practical teacher of anatomy and prosector; he also was for some time medical superintendent of the Hospital for the Paralysed and Epileptic in Queen-square. But it is in connexion with his labours on public health questions that Mr. Radcliffe secured his most lasting reputation. Having acquired some considerable experience on questions of health in the East during the Crimean campaign, he was selected by Mr. Simon in 1865 to prepare a report on the sources and development of the diffusion of cholera which then existed in Europe; a report was also prepared by him for the Privy Council office at about the same date on an outbreak of cholera at Theydon Bois; and it is certainly not too much to say that had Mr. Radcliffe never again written on the same subject his name would ever after have been identified with the standard literature on this important subject. The wide knowledge which Mr. Radcliffe obtained as to the topography of the East, and his immense power for accurate research, are brought out in a striking manner in these reports; indeed, from that date forward the Government invariably sought his aid in connexion with their investigations of Eastern epidemics in Europe. In 1867 followed Mr. Radcliffe's now famous report on cholera in the east of London, a report which embodied the results of an elaborate and impartial inquiry which led him to the conclusion that the terrible outbreak in question had been produced by the distribution of infected water from certain reservoirs of the East London Water Company. It was not long after the issue of this latter report that the Privy Council office secured the permanent services of Mr. Radcliffe as a medical inspector, and later

on, when the Local Government Board was formed, he was appointed to the post of assistant medical officer. From time to time he continued to issue reports on the prevalence of Eastern diseases, and these form by far the most valuable records on this subject which have ever been prepared in England. Thus, at the end of 1874 an exhaustive report was commenced, which recorded all the more important matters concerned with cholera diffusions in Europe during the preceding ten years. The report commences with the outbreak at Mecca in 1865; it traces its diffusion in such a way as to bring home to all who are open to conviction the fact that the disease had travelled by the various routes of human traffic and pilgrimage, and then it supplies a mass of details as to the various epidemic outbreaks in different European countries and towns, which of themselves give evidence of the immense amount of labour which was brought to bear upon the preparation of this important document. The last contribution of this sort consisted of an extensive report, issued in 1881, on the progress of Levantine plague in 1878-79, including the reappearance of the disease in Europe, and dealing also with the questions of quarantine in the Red Sea and of the sanitary regulation of the pilgrimage to Mecca. This report had a special value, insomuch as it effectually exposed the fallacies of quarantine regulations by land and sea.

But it was not only as an expert in the question of the distribution of Eastern diseases that Mr. Radcliffe must be regarded as holding one of the highest positions amongst workers in public health; he took his full share of the current work of investigations which were carried out in England to ascertain the causes of epidemics; his inquiries into the prevalence of erysipelas and pyæmia in connexion with faulty hospital construction and administration remain as standard contributions on this subject; and his very complete report on the means for preventing excrement nuisances in towns and villages has probably done more in this and other countries towards removing conditions of filth-poisoning than any other work ever issued. Mr. Radcliffe had also long been identified with the work of the Epidemiological Society, and after holding the office of honorary secretary for a long series of years, he was deservedly raised to the presidential chair in 1875. He was a constant and valued contributor to the pages of THE LANCET.

Some three years ago it was observed by his friends and colleagues that he was ailing in health, and then followed symptoms of paralysis which more than once compelled lengthened absences from official duties, and which early last year led to his resigning the official post he had so ably and honourably filled. Unfortunately, the progress of his illness prevented him from enjoying the rest he had so well earned, and latterly those of his friends who visited him were pained to see that a great light in the sphere of sanitation had evidently finally gone out. The actual symptoms which led to his death were of short duration. At the date of his resignation it was evident that his loss was much felt by all his colleagues, for, quite apart from his marked abilities, John Netten Radcliffe was the fortunate possessor of personal characteristics which had won for him a circle of true and sympathising friends, and which secured him against a single enemy.

The funeral took place last Wednesday at Highgate Cemetery, and was attended by several of his colleagues at the Local Government Board, by his brother, Dr. Charles B. Radcliffe, Dr. Glover, and other friends. Mr. Radcliffe leaves a widow and large family to mourn and deeply to realise their loss.

JOHN GUISE WESTMACOTT, M.D., L.R.C.S., EDIN.

WE regret to have to record the death of Dr. Westmacott, eldest son of the late Henry Westmacott, Esq., of Cadogan-place, Chelsea. The deceased was born in London in 1811, and matriculated at the Medical College, Edinburgh, in 1830. He then passed about three years in Paris, attending the various hospitals, and made interesting studies in water colours of "calculi" for different professors, which were published at the time. After quitting Paris he settled in New York, where he practised for about ten years, distinguishing himself especially in the treatment of the eye, as is testified in works by Bournan and others; he then returned to London and set up in practice. He was delineator of Anatomy and Pathology for more than twenty years at King's College, consulting surgeon for the Paddington Provident Dispensary for upwards of thirty years, surgeon and surgeon-major in the London Scottish Volunteers, and also surgeon to the X division of the police for more than twenty years. The drawings in Gray's Anatomy, Druitt's "Vade Mecum," Obstetrical Works, and other publications, bear testimony to Dr. Westmacott's abilities. The deceased was twice married, and leaves three sons and five daughters.

Medical News.

APOTHECARIES' HALL. — The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Sept. 4th:—

Mathews, Frank Edward, York-place, Hill-rise, Richmond.

The following gentleman also on the same day passed the Primary Professional Examination:—

Bray, Percy Dean, Middlesex Hospital.

The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Sept. 11th:—

Barwise, Sidney, The Oaks, St. Paul's-road, Birmingham.
Blackwood, Frederick Martindale, Park-place, W., Sunderland.
Callender, Milton Romaine, St. Thomas's-crescent, Newcastle-on-Tyne.
Lynes, John, Argyll-road, Kensington.
Pedler, William Frederick, Albert Villas, Serpentine-road, Regent's-park.
Williams, Edward, Great Coram-street.

BERLIN oculists assert that the dust from the elevated railroads has added five per cent. to the profits of their profession.

BADLY ventilated school-rooms are blamed by the New York Board of Health as the cause of a large percentage of the cases of pulmonary consumption in the State of New York, where one death in every twelve is from that disease.

UNIVERSITY COLLEGE.—The annual dinner of the old and present students of the Faculty of Medicine will take place at the Freemasons' Tavern on Saturday, October 4th. Sir William Jenner will occupy the chair, and a large gathering of old University men is expected. Application for tickets (price 12s. each) must be made before October 1st to D. Poore or Mr. Stonham, F.R.C.S.

SUICIDE OF A SURGEON.—An inquest was held on the 13th inst. on the body of Mr. Charles Palmer, surgeon, of Yarmouth, who was discovered dead on a lonely part of the South Coast between Eastbourne and Birling Gap. Evidence was given that surgical instruments were found upon the deceased, an artery in whose groin had been skilfully opened. A verdict was returned of suicide while in a state of temporary insanity.

NEW COTTAGE HOSPITAL AT LLANDUDNO.—On the 4th inst. the foundation-stone of a new cottage hospital, to be erected as a memorial to the late Mrs. Dr. Nicol, who was the founder of the movement, was laid by Lady Augusta Mostyn Gloddaeth. When completed, the hospital will contain twenty beds, besides convalescent ward, operating room, spacious hall, mortuary &c.; and the outlay will be £2900, upwards of £1500 of which sum has been subscribed.

THE EXAMINATION OF WATERS.—A Blue-book has been issued by the Local Government Board containing the second report of Dr. R. Angus Smith, one of the inspectors under the Rivers Pollution Prevention Act, 1876, on the examination of waters. Dr. Smith states that the Thames waters show distinct inferiority to the hill waters both as to hydrogen and transformation of gelatine. He had concluded from the experiments he had made that the water of the Thames, even after being filtered, was less pure than the waters of the uplands of England. That truth, he adds, could scarcely be called new, but the difference might be subjected to measurement and put into the form of figures so far as certain qualities were concerned. He could not, however, measure in the same way the effect upon health.

SMALL-POX IN THE ARMY AND NAVY.—A return published on the 6th inst. of the number of deaths from small-pox in the army and navy during each of the years from 1860 to 1882 shows that in 1860, with an average annual strength of 203,017, there were 30 deaths in the army, or a ratio of 0·15 per thousand. This percentage was increased to 0·22 in the following year, but since that time has been greatly reduced, the ratio in several years being only ·01 per 1000. In the navy the ratio per 1000 in 1864 was as high as 0·51, but since that time has not exceeded 0·26 per 1000, while in 1877 and 1878 there were no deaths returned from this malady.

SOCIAL SCIENCE CONGRESS.—The twenty-eighth meeting of the Social Science Congress commenced at Birmingham on the 17th inst., when the inaugural address was delivered by Mr. Shaw-Lefevre, M.P. The Congress is divided into five departments, as follows:—Jurisprudence and Amendment of the Law—President, Mr. John Westlake, Q.C., LL.D. Education—President, Mr. Oscar Browning, M.A. Health—President, Dr. Norman Chevers. Economy and Trade—President, Viscount Lymington, M.P. Art—President, the Right Hon. A. J. Beresford Hope, M.P. The weather being favourable, the gathering promises to be more than ordinarily successful.

NORTH-WESTERN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—The monthly meeting of this association was held on the 11th inst., Dr. M'Nicoll, presiding. Dr. F. Vacher called attention to the extent and limits of the powers given in the sections of the Public Health Act, 1875, which empower medical officers and inspectors of nuisances to deal with bad food. He pointed out that the Act conferred powers which it would be impossible to dispense with, and which, though less complete than they might easily be made, were as a rule fairly efficient and easily worked. The subject will be further discussed at the next meeting of the Association.

ARMY NURSES.—A Royal Warrant has just been promulgated, by which the provisions of the warrant of June 10th, 1884, relative to the nursing staff of the army, are amended. By the new warrant the pay of lady superintendents of nurses is to be £150, increasing £10 annually till it reaches £200. The lady superintendent of the Royal Victoria Hospital at Netley is to receive an additional allowance of £50 for training the nursing staffs and carrying out such duties as the director-general of the Army Medical Department may direct from time to time. A senior nurse, acting as superintendent, is to receive pay of £20 a year in addition to her salary. The lady superintendents at the Victoria Hospital, Netley, and at Herbert Hospital, Woolwich, shall, on relinquishing their duties, receive retired pay at the rate of 20 per cent. of their salaries after ten years' service, rising by 2 per cent. for each additional year of service up to a maximum of 50 per cent.

THE NIGHTINGALE FUND.—The annual meeting of the Council of the Nightingale Fund was held last week at the "Nightingale Home," St. Thomas's Hospital, Lord Houghton in the chair. The report stated that the number of probationer nurses remaining in the School at St. Thomas's on the 31st December, 1883, was 31, of whom 12 were special or lady probationers and 19 nurse probationers. From the opening of the School in June, 1860, to the end of 1883, a total of 739 candidates had been admitted, and 437 had left the School, after completing a year's training, as certified nurses. The number of failures was exceptionally large; they were due mainly to deficient physical strength. The Committee noted, as indicating the progress made in Training Schools for Nurses in connexion with other hospitals, the opening of the new building of the Westminster Training School and Home for Nurses, in connexion with the Westminster Hospital, of which Miss Pyne is the lady superintendent; the addition of largely increased accommodation for both probationers and nurses at St. Mary's Hospital, Paddington, where a successful School had been established under the matron, Miss Williams; and the opening of a Home for the same purpose at the St. Marylebone Workhouse Infirmary, Notting-hill, of which Miss Vincent is the matron. The abstract of accounts showed an income of £3881, and an expenditure of 1807, leaving a balance of £2074 in hand.

A TABULAR VIEW OF THE DAYS AND HOURS OF THE INTRODUCTORY LECTURES

*To be delivered at the different Medical Schools.**

	Lecturers.	Days and Hours.
St. Bartholomew's Hospital	(No Lecture)	
Charing-cross Hospital	(No Lecture)	
St. George's Hospital	Mr. Champneys	Oct. 1st 4
Guy's Hospital	(No Lecture)	
King's College	Rev. H. Wace, D.D.	„ 1st 4
London Hospital	—	„ 1st 3
St. Mary's Hospital	Dr. Lees	„ 1st
Middlesex Hospital	Dr. D. W. Finlay	„ 1st 3
St. Thomas's Hospital	Sir J. Risdon Bennett	„ 1st 3
University College	Dr. W. R. Gowers	„ 1st 4
Westminster Hospital	Dr. Hughes Bennett	„ 1st 3
Mason's Science Colege	Prof. Poynting	„ 2nd
University College, Bristol	(No Lecture)	
Queen's College, Birmingham	Dr. Sawyer and Dr. Fletcher	„ 1st
Sheffield School of Medicine	Mr. Birks	„ 1st 5
Leeds School of Medicine	Dr. Michael Foster	„ 1st
Edinburgh University	(No Lecture)	
Glasgow University	Prof. Lobshman	„ 28th
Anderson's College, Glasgow	Dr. Thomas Barr	„ 28th
Glasgow Royal Infirmary and School of Medicine	John Glaister, M.B.	„ 28th

* Owing to pressure on our space, the above was crowded out of the recent Students' Number.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BATES, CHARLES POPE, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Ramsey Urban Sanitary District.

BEATLEY, WM. CRUMP, M.D.Durh., M.R.C.S., late Senior Assistant Medical Officer to the Somerset County Asylum, has been reappointed Resident Medical Officer to the Newcastle-upon-Tyne Dispensary.

BRADSHAW, THOMAS R., M.D.Dub., M.R.C.S., has been appointed Assistant House-Surgeon to the Liverpool Northern Hospital.

BROWN, JAMES, L.R.C.P.E. &c., has been appointed Honorary Physician to the Bognor Convalescent Home.

CAMPBELL, JAS. J., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

DALZELL, J. KENNEDY, M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

EVANS, WILLIAM, L.R.C.P.Ed., M.R.C.L., has been reappointed Medical Officer of Health for the Anglesey United Sanitary District.

EWBANK, FRANCIS, M.R.C.S., L.D.S., L.S.A.Lond., has been appointed Dental Surgeon to St. Bartholomew's Hospital, vice Coleman, resigned.

FALKINER, N. M., M.B., has been appointed Joint Lecturer in Chemistry to Carmichael College.

HARDWICKE, Dr. W. W., has been appointed Medical Officer of Health to the Borough of Harwich. Also Medical Officer of Health to the Harwich Port Sanitary Authority, both vice A. Kinsey-Morgan, resigned.

HOBLEY, J. H., L.R.C.P.Lond. &c., has been appointed Medical Superintendent of Quarantine, Southampton, vice Bencraft, deceased.

HOPE, HENRY, L.R.C.P.Ed., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Southampton Port Sanitary District, vice Bencraft, deceased.

HOWARD, THOMAS, M.B., C.M., has been appointed House-Physician to the Royal Infirmary, Glasgow.

HUNTER, R. R., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

JEFFERY, EDWARD, M.D.Aberd., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Lowestoft Urban Sanitary District.

KENDALL, THEO. M., B.A.Sydney, L.R.C.S., L.R.C.P., L.M., has been appointed Assistant-Surgeon to St. Vincent's Hospital, Sydney.

LYS, FRANCIS DANIEL, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Wareham and Purbeck Rural Sanitary District.

MCMUNN, J. A., M.B., C.M., has been appointed Medical Officer to the Odd Fellows, Rechabites, and Parish of St. Anne, Alderney, Channel Islands, vice W. A. Ross, M.R.C.S., resigned.

MARSHALL, WILLIAM, M.B., C.M., has been appointed House-Physician to the Royal Infirmary, Glasgow.

MASON, HENRY, M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

MUIRHEAD, ISLAY B., M.B.Glas., has been appointed Medical Officer for the Second District of the Malling Union.

PARTRIDGE, SAMUEL, M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Darlaston Urban Sanitary District.

PEACOCK, ALEX., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

RANSON, WILLIAM EDWARD, M.R.C.S., has been appointed House-Surgeon to the Staffordshire General Infirmary, vice Frank Marsh, F.R.C.S.E., resigned.

RUSSELL, FRANK, M.B., C.M., has been appointed House-Physician to the Royal Infirmary, Glasgow.

SCOTT, ROBERT, M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

SMITH, WILLIAM HARVEY, M.R.C.S., has been appointed Medical Officer for the Meriden District and the Workhouse of the Meriden Union.

STARK, J. NIGEL, M.B., C.M., M.R.C.S., has been appointed House-Physician to the Royal Infirmary, Glasgow.

WADE, A. B., M.B.Edin., &c., has been appointed a Medical Officer to the Odd Fellows, Southampton, vice Bencraft, deceased.

WELCH, R., L.R.C.P.Ed. &c., has been appointed Medical Officer to the Southampton Workhouse. Also a Medical Officer to A.O.F., Southampton, both vice Bencraft, deceased.

WILSON, FRANK, M.B., C.M., has been appointed one of the Parochial Medical Officers for the Burgh of Paisley, vice Dr. Whitehead, resigned.

Births, Marriages, and Deaths.

BIRTHS.

ARCHER.—On the 16th July, at Moonta, South Australia, the wife of R. Kendray Archer, M.R.C.S., of a son.

BAKER.—On the 15th inst., at Lawn-terrace, Dawlish, the wife of A. De Winter Baker, L.R.C.P.Lond., M.R.C.S., of a son.

BEEVOR.—On the 10th inst., at Harley-street, the wife of Charles E. Beevor, M.D.Lond., of a son.

CADELL.—On the 13th inst., at Castle-terrace, Edinburgh, the wife of Francis Cadell, F.R.C.S.Ed., of a daughter.

CLARKE.—On the 4th inst., at 21, Lee-terrace, Blackheath, the wife of Ernest Clarke, M.B., B.S., of a daughter.

DAVISON.—On the 13th inst., at Langton House, Battle, Sussex, the wife of Rashell Davison, M.D., of a son.

DE MERIC.—On the 14th inst., at Weymouth, the wife of Staff-Surgeon E. V. De Meric, R.N., H.M.S. *Iris*, of a daughter.

PICKERING.—On the 13th inst., at Hargrave-terrace, Terenure-road, Dublin, the wife of T. H. Pickering, M.R.C.P., of Monte Carlo, of a daughter.

SEYMOUR.—On the 15th inst., at Sangora-road, New Wandsworth, S.W., the wife of J. R. Seymour, L.R.C.P., L.R.C.S., &c., of a son.

STARKIE.—On the 14th inst., at Sussex-street, Warwick-square, London, S.W., the wife of Richard F. Starkie, M.D., of a daughter.

WATSON.—On the 9th inst., at Weirfield, Penistone, Yorkshire, the wife of Alfred M. Watson, M.D., of a son.

WILLIAMS.—On the 10th inst., at Newbeggin, Richmond, Yorkshire, the wife of Howell Williams, L.R.C.P. and M.R.C.S., of a son.

MARRIAGES.

EMERSON—WILLIAMS.—On the 10th inst., at St. Peter's Church, Hammersmith, by the Rev. A. Tidcombe, George Augustus Emerson, M.B., C.M.Ed., I.M.D., to Edith Rachael, second daughter of the late T. R. Williams.

FREEBORN—LAWTON.—On the 10th inst., at St. Olave's, York, John Charles Richard Freeborn, M.A., M.R.C.S., to Emily Sarah, eldest daughter of the late George Lawton, Esq., Proctor of York.

GILLON—NOCK.—On June 5th, at St. Paul's Cathedral Church, Wellington, New Zealand, by the Rev. Fancourt George Gore Gillon, M.B., C.M., to Cathreen, youngest daughter of Joseph Nock, of Westminster, Frankley, near Birmingham.

HERMAN—GIBBINGS.—On the 5th inst., at St. Peter-the-Less, Chichester, by the Rev. W. D. Cowley, D.D., George Ernest Herman, M.B., M.R.C.P., of 7, West-street, Finsbury-circus, to Emily, fifth daughter of the late Thomas Gibbings, of Chichester.

HOSKYNS—IVESON.—On the 11th inst., at the Parish Church of Crich, Derbyshire, by the Rev. F. W. Moore, Vicar of All Saints, Duffield, assisted by the Rev. R. J. Hope, M.A., uncle of the bridegroom, Edward John Hadderton Hoskyns, Surgeon, Belper, to Rosalie Marie, eldest daughter of T. G. Iveson, Esq., C.E., of Crich.

RECKITT—YOUNG.—On the 3rd inst., at St. Paul's, Hammersmith, by the Rev. Cecil S. Pollard, Edward Bass Reckitt, L.R.C.P.Ed., of Boston, Lincolnshire, to Ellen Isabella, eldest daughter of the late Charles Vernon Young, 49, Aynhoe-road, West Kensington-park.

SHAW—SPALDING.—On the 2nd inst., at St. Helen's Church, Ore, near Hastings, C. Knox Shaw, L.R.C.P., M.R.C.S., to Ellen Elizabeth, daughter of Thomas Spalding, Esq., of Ore Place, Ore.

VACY-ASH—MAXWELL.—On the 11th inst., at St. Barnabas' Church, Kensington, Surgeon-Major R. Vacy-Ash, M.B., to Eliza, eldest daughter of Major T. Maxwell.

WALTER—WHITWORTH.—On the 4th inst., at Ulverston Parish Church, by the Rev. W. Crowther, M.A., Rector of Norton, Kent, uncle of the bride, assisted by the Rev. E. H. Aldridge, M.A., Vicar of Facit, Rochdale, and the Rev. C. W. Bardsley, M.A., Vicar of Ulverston, William Walter, M.A., M.D., of 20, St. John-street, and Hilton-park, Manchester, eldest son of Dr. Walter, of Dublin, to Gertrude Phœbe, only daughter of the late Edward Whitworth, Esq., of the Grange, Whitworth, near Rochdale.

DEATHS.

CADE.—On the 28th ult., at Spondon, Joseph Wright Cade, M.R.C.S., L.S.A.Lond., late of Breaston, Derbyshire, in his 88th year.

GOODALL.—On the 10th inst., at Southborough, Kent, William Preston Goodall, F.R.C.S., formerly of Birmingham, aged 50.

HAMILTON.—On the 10th inst., Alfred Hamilton, formerly Surgeon to the London Hospital.

KING.—On the 4th inst., at Torquay, David Alexander King, M.B., M.R.C.P., late of 26, Harley-street, in his 28th year.

PATERSON.—On the 7th inst., at Gainsboro', suddenly, Robert Haldane Paterson, M.R.C.S., L.R.C.P., aged 34.

SHARP.—On the 7th inst., George Wyatt Sharp, F.R.C.S.E., son of the late Henry Lockyer Sharp.

N.B.—*A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, September 18th, 1884.

Date	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 a.m.
Sept. 12	30·33	N.E.	62	59	107	74	56	..	Cloudy
,, 13	30·24	E.	65	61	115	77	57	..	Hazy
,, 14	30·09	E.	67	63	94	72	58	..	Cloudy
,, 15	30·06	E.	65	62	105	78	59	..	Overcast
,, 16	30·10	S.W.	67	64	110	79	63	·01	Cloudy
,, 17	30·23	E.	69	65	103	83	62	..	Hazy
,, 18	30·23	N.E.	69	64	100	79	62	..	Hazy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

THE BACILLUS OF THE "PERIOD."

THE Italians, slightly jealous of the temporary superiority of the Germans in pathological research, particularly in the investigation of the cholera microbe, are relieving themselves in a little satire, of which the following quatrain, freely translated, may be taken as a specimen:—

"Dr. Koch—with surprise it doth fill us—
Is hailed as a medical Solon,
For proving the comma bacillus
Is often attached to the colon."

Obstetrics.—Our correspondent must not be too proud to state the facts. He cannot claim the full consideration of a qualified and registered practitioner, but he will not find any medical man insensible to the facts.

Major Upton.—The best plan would be to advertise, when no doubt applications would be received from which a selection might be made.

Dr. Squire.—The matter is under consideration.

PECULIAR FORM OF PLACENTA CAUSING DELAY IN THE THIRD STAGE OF LABOUR.

To the Editor of THE LANCET.

SIR,—I send the following particulars, trusting they may be of interest.

Mrs. W——, aged thirty-five, multipara, was confined on Sunday, Sept. 7th. The child was born at 4 P.M., and after waiting the usual time, "expression" of the placenta was tried, after Credé's method. The uterus was well contracted under the hand, but appeared somewhat enlarged. After adopting this procedure for about twenty minutes, and finding that the placenta was not expelled, a vaginal examination was made. The placenta was found well down in the vagina, the examining finger almost reaching its inner extremity. Gentle traction on the cord was now resorted to; and, finding this useless, after a while strong traction was made, but all to no purpose. Being puzzled at this prolonged retention in the vagina, a more thorough search for its cause was about being made, when the placenta was suddenly expelled, to be followed almost immediately by a supplementary one, to which it was attached by a fibrous cord about four inches in length. On examination the first placenta was found to be very large, and of the "battledore" variety. The second, or supplementary, mass was rudimentary in structure, and appeared to be a quarter the size of the placenta proper. The fibrous band which connected them was pretty strong, and on carefully examining it a vascular communication between the placentæ was discovered running through its centre. This anomaly explained the retention of the placenta proper in the vagina, it being held there by its communication with the supplementary mass, which had not yet been expelled from the uterine cavity.—I am, Sir, yours truly,

Middlesbrough, Sept. 13th, 1884. WILLIAM BAXTER, M.D.

TEMPERANCE AMONG RAILWAY SERVANTS.

ALL men with grave responsibilities, whether railway servants or professional men, should be conspicuously sober. It is gratifying to know that the United Kingdom Railway Temperance Union numbers 5470 members. This is a great security against railway accidents.

Mr. Hugh Stott.—The question is strictly legal, and can only be answered by a legal authority, equally recognised by both parties.

Mr. G. Rivers.—See the leader on Cholera in our present number.

M.D.—Next week.

"WHAT IS A MINIM?"

To the Editor of THE LANCET.

SIR,—In reply to this query of Lieut.-Col. J. Herschel, C.E., I beg to state that in the Appendix to the British Pharmacopœia a minim is defined as being "0·91 grains of water;" it is about $\frac{1}{9}$, not $\frac{1}{8}$, of a grain, and is the 480th part of a fluid ounce, which is there defined, "the measure of 1 ounce, or 437·5 grains of water." The fluid ounce of water at 62° F. weighs 1 ounce avoirdupois, and the fluid drachm 54·68 grains, not 57 grains, as stated by your correspondent to be its "proper weight." It is true that the 128th (i.e., $\frac{1}{16}$ of $\frac{1}{8}$) of the old wine pint, which was the measure of 7289·72475 grains troy, gives 57 grains (nearly) as the weight of the old fluid drachm. This 57 grain fluid drachm, until the imperial measure was recognised by the London Pharmacopœia of 1836, was the one used in medicine. Since then the 54·68 grain fluid drachm has been in use. Your correspondent has proved his minim glass to be correct. My authorities for the above are the British Pharmacopœia and Gray's Supplement to the Pharmacopœia, edited by Dr. Redwood (also editor of the last British Pharmacopœia). It often causes great trouble to pharmacists, particularly in preparing solutions for hypodermic injection, that their units of weight and of measure, the grain and the minim, are not easily convertible; their ratio is 960:875. I learn with sorrow for coming pharmacists that the same system of weights and measures is to be continued in the next British Pharmacopœia. Although nearly every other civilised nation recognises the use of the metric system for dispensing medicines, the British Pharmacopœia is to be produced with the cumbrous weights as before, of which the grain is not even the aliquot part of an ounce, because, it is feared, the doctors and the chemists do not understand the metric system. I am, Sir, your obedient servant,

New Cavendish-street, W., Sept. 6th, 1884. WM. MARTINDALE.

To the Editor of THE LANCET.

SIR,—If Lieut.-Col. Herschel refers to the last edition of the British Pharmacopœia he will find, at page 402, a table showing that a minim is the $\frac{1}{7680}$ part of a gallon, by which is intended the imperial gallon, as the preface informs us. Another table on the same page states that a minim is the measure of 0·91 grain, and a fluid drachm of 54·68 grains of water (at 60° F.). As this agrees with the weight obtained experimentally by your correspondent, it is unnecessary to imagine a systematic blunder in the graduation of minim glasses; but (if the figures are correctly quoted) there certainly appears to be an error in Thompson's Conspectus.—I am, Sir, yours faithfully,

Moorgate-street, Sept. 5th, 1884. F. R. WALTERS, M.D., F.R.C.S.

To the Editor of THE LANCET.

SIR,—If it is remembered that at the introduction of the British Pharmacopœia the imperial measure of 20 oz. to the pint and the imperial pound of 16 oz. were adopted, whilst the grain weight was left intact, the discrepancy noticed by Lieut.-Col. Herschel disappears. He states that the imperial gallon weighs 10 lb., or 70,000 grains; and if he will work this down into pints, fluid ounces, drachms, and minims, he will find the latter weighs 0·91 grain. His practical weighing shows that the measure he used was perfectly marked. All graduated measures should be thoroughly tested, to see that the fluid ounce of water weighs exactly one ounce avoirdupois, and that the drachm (or sixty minims) weighs 54·68 grains. I am, Sir, yours obediently,

Sept. 8th, 1884. A COUNTRY DOCTOR.

To the Editor of THE LANCET.

SIR,—A minim is the 480th part of a fluid ounce. Since a fluid ounce (the 160th part of a gallon) of distilled water at 60° F. weighs 437·5 grains, and a minim is the 480th part of an ounce, therefore a minim would weigh 0·91152 of a grain, and the fluid drachm of sixty minims would weigh 54·69126 grains. Such being the case, the minim measure to which Lieut.-Col. Herschel refers was perfectly correct—more so than the generality. In the volume on "Materia Medica and Therapeutics" of Cassell's Manuals for Students of Medicine, page 17, Dr. J. Mitchell Bruce gives the weight of the minim as being 0·91 of a grain.

I am, Sir, yours faithfully,

Wilton, Sept. 8th, 1884. WALTER PIPPETT.

MISSING INSTRUMENTS.

To the Editor of THE LANCET.

SIR,—During my holiday a stranger called at my house and was admitted to my study to write a letter to me about his wife. This same man is in custody at Kensington, and on him have been found an ophthalmoscope case and a laryngotomy case. Neither of these is mine; but perhaps some colleague will like to know where he may possibly find his lost property. I am, Sir, yours faithfully,

LEONARD W. SEDGWICK, M.D.

Gloucester-road, Hyde-park, September 16th, 1884.

THE FRIENDLY SOCIETIES' INSTITUTE, BATH.

A VERY sensible and reasonable letter appears in the *Bath Argus* of Sept. 11th, against what the writer considers the arbitrary action of the committee in thinking of dismissing the medical officer without consulting the members.

Mr. W. H. Day.—The point made is ingenious, but will not avail in the present state of the law, which draws a clear distinction between vaccination and inoculation, which science does also, in spite of the theory alluded to. Moreover, in any case the *law enjoins* vaccination.

W. J. M. (Sutton).—Was the certificate sent direct from the office to the medical man, asking for the information; or was it brought to our correspondent, and the application made by the parties claiming?

M.D.—The question is not clear.

WANTED, A DIAGNOSIS.

To the Editor of THE LANCET.

SIR,—Can any of your readers give me a diagnosis and the line of treatment to be adopted in the following cases.

A patient of mine, a gentleman aged thirty-six, chief clerk in a merchant's office, has for the past three or four months noticed a gradually increasing weakness in the right hand and an inability to hold the pen firmly between the fingers. At the present time he forms his letters with considerable hesitation. There is no cramp, no spasmodic or irregular jerking of the muscles of the fingers, none of the usual symptoms of a typical case of "writer's cramp," an affection which his occupation would naturally lead one to suspect. There is simply muscular weakness, perhaps it might almost be called muscular incompetency. But the curious point is that his brother, aged thirty-two, whom also I have seen, living in a different part of the country, and whose duties do not require him to write more than a score or two lines a day, is troubled with the same affection. In neither case is there muscular wasting, nor was it preceded by lightning pains. There is nothing in the family history bearing upon the case, and neither of them has had any serious illnesses in former years. The elder of the two is a total abstainer and non-smoker, the younger is a moderate smoker. Physically they are healthy and strong. The fact that in the case of the younger brother the affection is not traceable to over-use of the muscles leads one to suspect that in the one case, if not in both cases, its origin may be spinal, and that there may be some want of coördinating power over the muscles. In the way of treatment, rest and sea-bathing have been tried, but with little or no improvement. Galvanism has not yet been resorted to. Can you give me any suggestion as to its cause, pathology, and treatment? I am, Sir, yours truly,

September 16th, 1884. M. B. E.

Z.—We do not remember such a point being raised in a law court. The error would have to be very serious.

Mr. John Brown.—We do not recommend individual physicians. The knowledge of gout is not monopolised by one man nowadays.

R. T. D. and others.—The card is beneath notice.

J. T. P.—We do not remember the appearance of the receipt mentioned.

"NON-QUALIFIED, EXCEPT AS TO SURGERY."

To the Editor of THE LANCET.

SIR,—I shall be obliged by your letting me know at your convenience if there is any authority in the profession of medicine to whom a member of the public might properly apply for opinion on a prescription. I desire such an opinion on a prescription given by a medical practitioner, and acted on (but with unsatisfactory effect), in order to ascertain whether it is a competent prescription, the person who gave it being a non-qualified practitioner, except as to surgery.

I am, Sir, yours truly,

Sept. 8th, 1884. C. O'B. M.

*** There is no such authority. The fine distinction between qualifications is rather a legal refinement than anything else. It is kept up in the interest of the numerous separate corporations which persist in asserting their right to be maintained by the profession after the reasons for their separate existence have been abolished, with the result of entailing offensive charges of incompetence, as above.—ED. L.

A. T. Brand, M.D.—See the articles on Home Health Resorts which appeared in THE LANCET of Aug. 9th and 23rd.

Richard James.—A work on the subject mentioned may be obtained from any of the medical booksellers.

Mr. J. G. Fennell.—We regret we cannot afford the information desired.

"SKILLED NURSING."

To the Editor of THE LANCET.

SIR,—So many people have written to me about the letter which appeared, signed "E. Faithfull," in THE LANCET a fortnight since, that I should feel very grateful if you would kindly state in your next issue that I am not the writer of it, for I should scarcely wish to endorse the same. I have been in Scotland since my return from the United States, finishing my volume, "Three Visits to America," which will be brought out here and in New York in October.

I am, Sir, yours very truly,

Bryanston-street, W., Sept. 11th, 1884. EMILY FAITHFULL.

Inquirer.—No such appointment is recognised either by the Public Health Act or the orders of the Local Government Board, and that Board object to the delegation of sanitary work to a deputy. If a medical officer of health is temporarily unable to perform his duties, the appointment of a substitute is sanctioned; but if an officer is not capable of performing his duties, he is expected to resign.

M. M. M.—Medical men are supposed to attend each other without money considerations; but there are circumstances of distance, inconvenience, &c., which make it reasonable to offer a fee, or to take other means of showing that medical kindness is appreciated by medical men.

James Campbell.—There is no particular work on the subject, but the matter is treated in most books on Diseases of the Skin.

Enquirer shall receive a reply next week.

Mr. Creske.—The statement has already appeared in THE LANCET.

INFANTILE CIRCUMCISION.

To the Editor of THE LANCET.

SIR,—I frequently perform the operation of circumcision on new-born infants—that is to say, on infants eight days old. It forms part of the religious ceremony observed on initiating male children into the "Hebrew Faith," and is rarely, if ever, neglected. My experience may therefore be of use to "Foreign Practitioner," who seeks information on the subject in your issue of the 6th inst. Your able answer gives a clear description of the principal points of the operation; but, if I may be allowed to add a few remarks, I think that it will be found that the operation is not so formidable as it may at the outset appear. When the prepuce is drawn in front of the glans, as you describe, I use a shield to grasp it, which consists of a tolerably thick silver plate, having a slit in it narrowing from the circumference to the centre. The prepuce is forced into this slip, and the shield is applied in a slanting direction from above downwards, as mentioned in Erichsen's Surgery, vol. ii. The advantage of this shield is that it is light, easily adjusted, and remains in its place without the aid of an assistant. Then, instead of slitting up the mucous membrane, I tear it along the dorsum with my thumb nails, which, to prevent slipping, I cut into points, so that they easily seize and retain it. In this way I tear no more than is sufficient to allow of the membrane being pushed well back, so that the glans are thoroughly exposed. I next apply a piece of boracic lint tightly round the penis behind the glans, as you describe. But I use no stitches of any kind in infants, nor even in children of two or three years of age; and my experience is that the edges come together of themselves, and the wound heals rapidly, usually in three or four days, without the necessity for further interference, beyond attention to cleanliness and the observance of the simplest rules in surgery. To guard against the lint being disturbed I bandage the child's knees and legs together with a napkin for a few hours after the operation. Performed in this way, I have never met with the slightest difficulty, and have always had most satisfactory results.—I am, Sir, yours obediently,

Warrington-gardens, Sept. 8th, 1884. M. CLIFFORD, M.R.C.S., &c.

To the Editor of THE LANCET.

SIR,—In your issue of the 6th inst. "Foreign Practitioner" asks for information respecting the operation of infantile circumcision. In reply you recommend sutures to be used, and I believe the standard works on surgery do the same; but I am convinced it is a mistake. I have performed the operation on more than forty boys within the last two years, and rarely pass a week now without a case. At first I inserted sutures, but soon discontinued doing so, finding so much irritation and swelling arise therefrom, besides leaving when healed a ragged and thickened edge to the remaining portion of the prepuce; and being, as I believe they are, worse than useless, it is as well to avoid the unnecessary pain caused by their insertion. In my last thirty cases I have not inserted a single suture, and they have all done well; neither have I used an anæsthetic of any kind, and have only dressed the wound with lint first wetted with cold water for three or four days, and then with olive oil. If any undue hæmorrhage take place (which is very seldom) after the operation, a drop of the solution of perchloride of iron has arrested it, where the cold water has not proved sufficient.

I am Sir, yours truly,

Northampton, Sept. 9th, 1884. A. G. WILKINSON.

A Constant Reader.—The questions are not free from difficulties. They involve not only the law of qualification, but the law of contract, upon which we cannot speak dogmatically; but, clearly, in a moral sense, an agreement is binding, whether witnessed or not.

"PERFORATED RUBBER KNEE-CAPS."

To the Editor of THE LANCET.

SIR,—With reference to the above, I observe that your correspondent, Mr. E. D. Huxley, has omitted to give the name of its inventor thirty years ago; neither has he mentioned the names of "practical" men who were compelled, owing to its inutility, to abandon its use in despair. I recorded personal experience, and should be glad if that gentleman could furnish the same.—I am, Sir, yours faithfully,

Birmingham, Sept. 9th, 1884. HUGH THOMAS.

M.D.—There are many good works of the character desired, but we cannot particularise. The one mentioned cannot be recommended.

Mr. A. W. Graham shall receive an answer next week.

IN the list of the Westminster Hospital Lecturers, in our recent Students' Number, the name of Mr. O. Hehner, who conducts the practical chemistry classes, was inadvertently omitted.

Mr. Joseph Morton.—Our correspondent's questions are not clearly put. Question 1 is too hazy to be answered; but we may state that no medical school or society in London "passes" men.—2. No university will accept certificate of success in examinations elsewhere in lieu of its own examinations.—3. No.

Sempronius.—The case is eminently one for friendly settlement.

"CASE IN DENTAL PRACTICE."

To the Editor of THE LANCET.

SIR,—The case quoted by Mr. Percy May in your issue of the 30th ult. concerning the sympathy between ear and teeth is of very great interest, for the relations these parts bear to each other have been very little studied compared with those reflex phenomena which occur in the eye and its structure. In fact, I am not aware of very much explanation having been recorded concerning such cases. For this reflex trouble I have at various times been compelled to advise the removal of teeth for no other reason than that the means adopted for their preservation seemed to increase the evil. One case I have lately had under treatment where the patient, a young man, has a mesial cavity upon the left upper first molar. The tooth is "dead;" the fang cavities have been excavated and filled, but when the cavity is closed the deafness and slight pain in the ear are increased. The tooth is quite free from peridental lesions. Its retention being of great service to the patient, I have loosely filled the fang cavities with cotton-wool and inserted a tube through the filling. I believe there is very little inconvenience for the present.

I am, Sir, yours truly,

W. T. ELLIOTT, L.D.S. Edin. and Dub., F.C.S.

Birmingham, Sept, 8th, 1884.

Richmond.—Yes. Members of other British colleges can be admitted to the examinations of the Royal College of Surgeons of England and the College of Physicians. Certain conditions have to be observed, which will be found stated in our Students' Number or in the Medical Directory.

Volunteer Surgeon.—1 and 2. Longmans and Co.—3. Clowes and Sons.

CHOLERA IN MARSEILLES.

To the Editor of THE LANCET.

SIR,—In a recent issue of your journal I saw an allusion to the fact that there were cases of cholera in Marseilles last autumn. Now that the fact has oozed out there can be no harm in my stating what I know on the subject. Last October I stayed some weeks in Marseilles, attending the hospitals regularly. One day I was taken by a medical friend to see what he called a "clinical curiosity." It was undoubtedly a case of Asiatic cholera, though I was amused to see that the diagnosis put on the board at the head of the bed was "bilious irritation." I believe that an oath was administered by the chaplain to all the medical attendants that they would not divulge what they saw. No such precaution was taken with me, possibly because I was a heretic, and my word was considered as good as my bond—both being equally valueless. I am, Sir, yours faithfully,

ALFRED DRYSDALE, M.B. Lond.,

Mentone, Sept., 1884. Officier de Santé.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Farmer, Colchester; Messrs. Bermingham and Co., London; Mr. White; Dr. E. M. Schaeffer, Baltimore; Dr. R. Saundby, Birmingham; Mr. Paget, London; Mr. Stott, Colney Hatch; Dr. Gordon Holmes, London; Mr. Tallach, London; Dr. W. O'Neill, Lincoln; Dr. Rogers, London; Dr. J. B. James, London; Messrs. Essinger and Neubarger, London; Mr. H. C. Williams, Manchester; Dr. Lucas, London; Mr. Pulling, London; Mr. T. Holmes, London; Dr. Lee, London; Mr. E. S. Pattison, Fulham; Dr. Pippette, Wilton; Dr. W. M. Kelly, Taunton; Mr. C. O'B. Murphy, Belfast; Dr. A. G. Wilkinson, Southampton; Dr. Brand, Driffield; Dr. H. Thomas, Birmingham; Rev. H. Swann, London; Mr. W. T. Elliott, Birmingham; Mr. H. G. Aldous, London; Dr. Field, London; Dr. R. W. Middleton, Fulham; Mr. F. Wilson, Paisley; Messrs. Loeffland and Co., London; Dr. Dobson; Mr. W. P. Bell, London; Mr. A. Drysdale, Mentone; Mr. James, Dudley; Dr. Walters, London; Mr. Rivers, Ilkley; Dr. Paramore, London; Mr. Martindale, London; Dr. Moxon, London; Mr. Whitey, London; Dr. T. P. A. Stuart, Sydney; Dr. Baxter, Middlesbrough; Mr. Waghorn, London; Mr. W. H. Day, Norwich; Miss E. Faithfull, London; Mr. Morton, Glasgow; Dr. Collie, London; Mr. Brown, London; Dr. D. Freire, Rio Janeiro; Dr. Scattergood, Leeds; Mr. Boughton, Gloucester; Mr. Algar, London; Messrs. Smith and Son, Birmingham; Mr. P. Ness, Liverpool; Mr. Walton, Blackpool; Mr. Mackay, Edinburgh; Mr. Harries; Mr. Roberts, Henley-on-Thames; Mr. Andrew, Manchester; Dr. Adam, West Malling; Messrs. Smith and Son, Dublin; Dr. Hayes, London; Mr. Austin, Faversham; Mr. Woodland; Rev. J. D'Orsey; Mr. Maythorne, Biggleswade; Mr. Hodgkins Oxford; Messrs. Wilkinson and Co., London; Messrs. King and Co., London; Mr. Hecks, London;

Mr. Gurnon, London; Mr. Roberts, Sheffield; Mr. Forman, Virgin Island; Mr. Russell, Birmingham; Dr. Soulonniac, France; Mr. Sell, London; Mr. H. Williams, London; Mr. Lister, London; Dr. T. Wharton Jones; Mr. W. A. J. F. Mickle; A Country Doctor; V. G.; M. B., Epsom; M.D.; H. S.; Medicus, Malmesbury; M.D.; M. L., Tunbridge Wells; W. T. S., Finsbury; Alpha; Obstetrics; One Interested; Iridium; Isquirer; M. B. E.; Cecelian; M. M. M.; Z.; J. F. P.; Bab; Rickword; M.D.; Sempronius; Enquirer.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Leggatt; Mr. Jollye, Donington; Mr. Blythe, East Knowle; Mr. Clarke, Burton-on-Trent; Mr. Edwards, Paris; Mr. Brian, Leicester; Dr. Wood, Pontypridd; Mr. Adams, Ipswich; Mr. Barry, Hartlepool; Mr. Hinwood, Gravesend; Mr. Lyng, Saxmundham; Mr. Watts, Moorgate-street; Mr. Miles; Mr. Ormrod, Workington; Mr. Morgan, Ipswich; Mr. Griffith; Mr. Hewett, Kersal; Messrs. Prescot and Co., Manchester; Mr. Richards; Mr. Mackay, Esk; Mr. Matheson, Milford Haven; Mr. Cades; Miss Hutton, Hanwell; Dr. Reid; Mr. Foster, Knowle; Messrs. Ryas and Son, Bow; Mr. Sweeting, West Runton; Mr. Morris, Swansea; Messrs. Kensington and Co., London; Dr. Maltby, Basford; Dr. Taylor; Mr. Sprout; Mr. Heaton; Mr. Parker, Eccleston; Mr. Anson, Southwold; Messrs. Squire & Co., Tavistock; Mr. Montgomery, Hovendon; Mr. Winter, Oldham; Miss Henderson; Dr. Clarke, Lee; Mr. Howes, London; Mr. Banks, Cheltenham; Messrs. Porteus and Co., Glasgow; Mr. Gardner, Bournemouth; Messrs. Roberts and Co., London; Mr. Still, Sheepshed; Mr. Humphreys; Messrs. Bibby Bros., Liverpool; Dr. Norton, Folkestone; Mr. Ellis, Helston; Mr. Jones, Tonypandy; Mr. Ker, Halesowen; Mr. Parrot; Mr. Johnston, Sheffield; Messrs. Brady and Martin; Dr. Taylor, Newcastleton; Dr. Williamson, Ventnor; Mr. Morton, Sheffield; Mr. Edwards, Wye; Dr. Wickham, Newcastle-on-Tyne; Mr. Gordon, Peterafield; Mr. Rickett, Boston; Mr. Bethys, Woolwich; Mr. Joyce, Winchester; Mr. Knight, Grimsby; Mr. Cooke, Halifax; Mr. Davies, Pontypridd; Messrs. Pope and Sons, Downham Market; Mr. Tomson, Liston; Miss Davis, Godalming; Mr. Johnson, Sheffield; Dr. Spender, Bath; Messrs. E. Smith and Co., London; Mr. Thompson, Wardington; Mr. Eames, Hilderthorp; Mr. Cox, Harrogate; Mr. Geach, St. Agnes; Dr. Whitla, Belfast; Messrs. Robbins and Co., London; Mr. Birch, Newbury; Mr. Box, Fairfield; Mr. Cockle; Mr. King; Mr. Wilson, Bishop Auckland; Miss Reynolds, Ashford; Mr. Farr, Dunstable; Dr. Squire, London; Mrs. Chapman, Clapham; Miles; T. L.; Neurosis; W. L., Forfar; M.B., St. John's-wood; H. S., Burford; Medicus, Omagh; Horace, Swanage; H. E. P.; Dr. H.; W. S., Birmingham; Alpha, Commercial-road; B. B. B.; Medicus, Bristol; R.; A. Z.; M. I. D.; F.S.A., Wye; T. Y.; Dr. C., Liverpool; C., Edinburgh; T. W. M., Liverpool; W. D.; M.A., Brighton; T. N.; Medicus, Folkingham; Ajax; Medicus, Great Marlow; Medicus, Southport; X. Z.; Surgeon, Penistone; X. Y. Z., Hammersmith; I. T., Arlington; J. T., Leicester; Alpha; V. R. J.; Veritas; Constanter, Bristol; Surgeon, Newcastle-on-Tyne; Medico; I. M. D., Barnsbury; W. H., Harrow-road; H. G., Kennington; A. K.; X.; A. H., Kentish Town; Peto, Leeds; Physician; Beta, Dalton-in-Furness; N. A., Brighton; Alpha; L.R.C.S.I., Southwark; M.R.C.S., Chew Stoke; M. S., Ilfracombe; B., London; X. Y. Z., Birmingham; Medicus, Wigan; M.A.; M. S.; M. A. B.; Medicus, Nottingham; Edgar, Chiswick; Practitioner; Delta, Bow; R. S. T., Manchester; Mac; F. T.; R. C., Truro; Sanvitor; C. C., London.

Watford Observer, North Cheshire Herald, Alnwick Gazette, Kent Courier, Bath Argus, Manchester Examiner and Times, Montreal Gazette, Liverpool Courier, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

Tuesday, September 23.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

OPHTHALMIC Operations on Mondays at 1.30 P.M., and Thursdays at 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Wednesday, September 24.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.—Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Thursday, September 25.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, September 26.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, September 27.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.